

FROM
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KANSAS CITY, MO.

TO
Miss Mary
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Kansas City, Mo.

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Alleg. Green
Holley.

From the Lectures

of
Benjamin Smith Barton M.D.

Professor of
Materia Medica

Natural History
and,

Botany

in the

University of Pennsylvania,

Taken by St. Clair Streett.

There has been several methods
instituted for acquiring a knowledge of Plants;
but those that are now more generally resorted
to, are the following - By Chemistry - Botanical
affinity, sensible qualities and experience -
Chemistry has not assisted us much hitherto
in acquiring a knowledge of plants, for
many articles yield the same product
on analysis that possess very different
properties - The Abba Fontana took six grs.
of the Venom of the viper and added to it 50 drops

of nitrous acid, which was put into a small
 retort, & heat applied, he found that a little com-
 mon, fixed air and Phlogisticated air was the product
 of this distillation, he then tried the same experiment
 with this exception, that instead of the Venom of
 the viper, he used Gum arabic, and he declares
 that the product was exactly the same. This is
 sufficient to prove the uncertainty of Chemistry
 in acquiring the knowledge of Vegetables, for we
 know perfectly well that the Venom of the Viper
 is capable of producing the most fatal effects
 on the System, while the gum arabic is mild
 and perfectly innocent. The only advantage *Materia*
Medica, is, that by it, we are enabled to ascertain
 whether a plant contains oil resin gum or some
 volatile principal. By botanical affinity we can
 gain a much better knowledge of plants, for instance
 the following plants resemble each other by having
 four petals 6 male organs of generation & short &c
 long, as the horse radish & the common turnip & the
 water cress &c - all have the same medical
 properties - The hollyhock & mallard or *Stramonium*
 & the nightshade It has been remarked by a
 great man, that those plants that flower & fruit
 alike have all similar properties - But a very
 good instance to the contrary may be observed
 in the crab apple & the common apple - Botanical
 affinity may be compared to the science of Physiog-
 nomy - by the countenance of a man we can
 very often judge whether he be dull or lively
 amorous or phlegmatic, but in this we often fail
 for the faces of Newton Lord Bacon, Brown and
 many others evince no mark of genius -

So it is with botanical affinity; plants of the same genus possess often very different properties. By the sensible qualities of plants, as taste &c. - we are often very much deceived. Because some plants that are acid to the taste are innocent; while others that are sweet are poisonous. By experience we may acquire the best knowledge of vegetables, but of this I shall speak in another place. Before the ancient manner of acquiring the knowledge of plants was known the doctrine of Signature was the only one prevailing. For instance those plants that resemble any part of the body, was supposed to possess properties that would cure the disease of those parts & these notions have been supported by men of great reputation as Lord Bacon &c. But these puerile theories are now justly exploded. Mr Dancy has attempted to analyse of Digitalis & thinks that its medical properties may be explained by the known effects of its constituents, but this is unfounded because Digitalis yields nearly the same products as other plants that have not the same properties. It has been asserted by many that those plants that afford resin all possess similar properties but this is not true, because opium yields the same resin as bark gum kino & others and yet its properties are very different.

November 12th

All the plants arranged in the Genus Tetrady-namia possess nearly alike properties as some of the acid & purgent plants before mentioned; but this will not hold good in all instances; the common stramonium in its different parts possess very different properties, the fruit is very agreeable & innocent, but the root is very astringent. In the Poppy from which we obtain our opium the

Different parts are very different in their effect on the human body. The juice of the head is narcotic, the seed inclosed in the same pod is innocent, & from them is obtained an oil which is used almost as extensively as the oil of olives. In the may apple we have a good instance of the different medical properties in the different parts; the root of this plant is a safe & agreeable purgative, in some instances superior to jalapp or Rheubarb, the fruit is excellent & to many delicious, while the leaves are poisonous. It is true that there are some plants every part of which possess more or less of the same virtues, but those instances are not numerous; Climate has a very astonishing effect on Vegetables, so that some great products very different from the same plant under different degrees of latitude. The sweet gum is found in the Southern states to great large quantities of an useful resin, but the more we advance to the North, the less it affords untill there is none at all. The common cabbage that is cultivated in city gardens & other close places, is much less healthy than when raised in the country. In the former we find a much stronger & even a nauseous odor & when submitted to distillation yields a much larger quantity of concrete Annonia, than those brought to us from the country. By the sensible qualities we mean the taste smell & colour of plants. The Antients only make use of two methods of ascertaining the virtue of Vegetables. The 1st is by the external appearance & the 2^d is by the taste. Dr. Cullen asserts that most of those plants that are without odor or taste are inert, but to this there are many exceptions. The *Alia Fontana* asserts that the venom of the viper is nearly tasteless & without odor & when laid on parts where the skin is not charred is innocent. I my self tried the experiment & found a very different result. I put a little of the venom expressed from the

Langs of a rattlesnake, on the tip end of my tongue, & in-
-stee my whole mouth was at were on fire, this lasted
for 12 hours, I tried the experiment with some rattles
& it produced almost instantaneous death, the taste &
smell may sometimes be of considerable service, but at
other times extremely uncertain. There are many
kinds of tastes we can perfectly distinguish the acid
the bitter & the sweet, but there are many others that
are mixed & unintelligible, the nauseous taste is often
made use of to express a disagreeable taste, but this is
wrong because the same plant may be agreeable to one
& disagreeable to others.

Seneca asserts that odorous bodies acts on the ner-
-vous system only while sapid bodies act only on the
muscles; but this is a mistake, Camphor volatile
alkali & many others act both on the muscles &
nervous system. ---

November 14th ---

The common sellary when green have strong &
unpleasant smell. Linnæus says that plants in
general without colour are insipid, this is in some
instances true, but will not hold good as a
general proposition, the common sellary as it is
brought to our tables, is indeed almost insipid
& perfectly innocent, but in its green state it
has a strong unpleasant smell & taste is even
narcotic. Hemlock is one of the most active
medicines; yet if it be made to grow without
light it is perfectly mild and may be eaten
in large quantities without danger, again
Seneca says that the green plants has a crude taste
the yellow a bitter taste. This latter is in many
instances true as the quassia columbo & many
others, there is indeed some exceptions, as the yellow
pimper is not bitter but sweet. The red colour says
the same naturalist denotes an acid taste, as in the
cranberry, sumach & the flowers of most plants,

The white current is much less acid in the unripe state than the red - But according to this rule the red best should be acid and whereas it is sweet - Black colours are said to denote poisonous plants as the Night shade Henbane &c. - But the white berry is not poisonous, but mild & very palatable; upon the whole it will be of importance to remember the Senian Aphorisms - Dr. Barton proceeded to mention the different arrangement of the Materia Medica by Seneca & Darwin after mentioning Nutrientia, incitantia revergentia & terpentia of Dr. Darwin, he made some ~~observation~~ observation to show the bad arrangement & promised to give one of his own in future -

November 15th

Dr. Cullen's arrangement of the articles of the Mat. Medica, I believe to be the best that have been published altho he has errors which may may be made appear to you all; Under Dr. Cullen's class sedentia or sedatives, there is placed opium, which is one of the most powerful stimulents with which we are acquainted. In my own arrangement of the articles of the Mat. Medica, I shall generally follow Dr. Cullen & altho there are many things in his arrangement, that are very erroneous, yet by making some additions - I hope to have a system much more perfect - In what manner medicines operate on the living system, I shall not at present attempt to explain - It is certain that some are absorbed & enter into the circulation, as the litters tones &c. - while others act simply on the solids, as arsenic, sugar of lead & many others -

There are two grand divisions of the Mat. Medica viz the Mat. Alimentaria & the Mat. Medica or the History of medicines. I have always hitherto begun with a consideration of the first of these, but this season I have altered my plan, & shall first treat of the Mat. Medica, but before I commence permit me to make a few observations on what Dr. Cullen considers to be the necessary constituents in the formation of chyle, which he considers to be an acid an oil & sugar. That sugar & oil both are necessary in the formation of chyle is very evident because most of the articles which compose the Mat. Alimentaria affords both sugar and oil; but how Dr. Cullen can conceive an acid to be essential in the formation of chyle I am at a loss to tell, but possibly this may have originated from Dr. Cullen's crude notion of the function of digestion. I shall add to Dr. Cullen's necessary Nutrientia, a mucilage Gum, calcareous earth, water carbon & light; this last it self can be considered of little service in the nourishment of the body. But it is certain that it causes the other agents to act with greater force. I shall with Dr. Cullen begin first with the consideration of astringents, some writers have abolished this term altogether, & it is probable that I shall very soon discard the term likewise because most of the medicines generally among arranged under the head astringentia might with propriety be placed with the tonics, but I am not altogether prepared to take this step.

Dr. Cullen's Ideas of the operation of astringents are certainly erroneous he supposed the operation of astringents on the living & dead matter to be exactly similar but many proofs might be

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adduced to prove the fallacy of this opinion. In the operation of tanning, the hides become 's heavier & denser than they were before, now the effect on the living system is very different. A Gentleman of this City made several experiments in order to ascertain the operation of astringents, in one of these he made a strong decoction of oak bark, & caused it to be put into a small vessel in another vessel he had a quantity of hot water, into each of these warm fluids, he immersed one of his hands, & continued the process for several hours when he examined his hands, he found not the least difference in the appearance of the skins, & the perspiration was very observable on both. This proves to a certainty that the operation of astringents on the living & dead matter is essentially different.

November 18th

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Plants like animal possess irritability & contractility, in order to show that plants possess contractility I made the following experiment, I took three of the aspharalia or common sponges, & divided them equally, the milky fluid poured out in great abundance while this was going on I dipped one of the branches into a solution of alum, another into a solution of sulphate of copper, & the third into warm water, the fluid which distilled from the ends of the branches of the two first was instantly stopped, whilst that branch immersed in warm water continued to pour out its milky fluid. Does not this prove that the same contraction of vessels take place when astringents are applied either to plants or the living human system. We should naturally infer from this experiment, that astringents act on the

Parts to which they are immediately - Dr. Ferriard places so little reliance on the action of astringents, as to influence his practice very much in the treatment of diseases, he says that it does not appear from reason that the small quantity of astringent matter supposed to be absorbed, should have any effect on remote parts but in our practice we are not to be guided altogether by reason - Does it appear reasonable that so small a quantity of arsenic as the $\frac{1}{16}$ part of a grain should prevent the attack of an Intermittent fever -

In a family near this city I had frequent occasion for visiting a little child 13 months old who had a violent attack of intermittent fever, the system was in that state when I thought proper to give a small portion of powder solution of arsenic, I ordered one drop to be given in my presence, which produced the child violently, I gave a second drop it had the same effect I endeavoured to account for it by attributing it to some accidental circumstance & requested that a smaller portion say one drop diluted with two tea spoonfuls of water should be given in divided doses this had the effect of completely stopping the paroxysms of the fever altho it had taken before the most powerful Tonics without effect - This case proves that Dr. Ferriard's reasoning is not to be relied on - I have seen violent Hemorrhages from the uterus stopped in less than ten minutes by the exhibition of a small quantity of the sugar of lead say 1 grain, the small quantity of the sugar of lead & of the arsenic above mentioned cannot be supposed to be absorbed, and upon the whole I must conclude with Dr. Cullen that the impression was made on the stomach & conveyed I know not how to the parts to which their operation was ascribed But from these observations you are not infer that

I deny the absorption of medicines altogether, this would be futile in the extreme; because we know that madder in its colouring matter will be absorbed & tinge the bones, with its peculiar colour, & there are many other instances of a similar nature—We are now to enquire into the principal which are supposed to be necessary to constitute an astringent. Some suppose that the gallic acid alone is the astringent principal while others suppose it to be the gallic acid combined with an earthy base—Dr. — formerly paid great attention to this part of our subject, the Dr. says that he detected in most of the astringent substances, the gallic acid & a white powder, which had all the characteristic of Alumina but the Dr. had reason to change his opinion before he died—An ingenious graduate of this university Dr. Walker of Virginia has proved very handsomely in his inaugural dissertation that the astringent principal may not be a gallate of alumine but of magnesia, of lime & many others and that mallic acid as well gallic, when combined with earthy bases will form an astringent substance— I shall now make some observations on the use of astringents as it respects the Pharmaceutical treatment. It be assumed as a good general rule, that astringents given in substance will be more efficacious, as the astringent matter will be more completely digested by the gastric juice than any other juice, Pure resin is not soluble in the gastric juice—Hence the impropriety of giving resin Pills—Resin when combined with mucilage or a gum is readily soluble, & in this way they ought to be generally given—

Of the diseases in which astringents are useful of this I shall give nothing but a general view until we come to speak of particular astringents—
In all ages astringents have been recommended.

in the cure of Intermitants, & there is no fact better established than that these medicines are the most efficacious in fevers of this kind. but in general astringents are exhibited in combination with bitters or aromatics, & these probably may be auxiliaries. In cases of delicacy astringents are frequently made use of. But the term delicacy I consider to be used much at random, & Physicians frequently prescribe astringents & tonics for weakness. There patients absolutely requires other remedies, for instance I am my self very weak in my muscular system, yet my pulse is in that state of febrile action, in the exhibition of astringents would be very injurious. In cases of dropsy, when there is much febrile action, as in the commencement the exhibition of astringents would be attended with danger; but if something like an Intermitant is discernible in the fever attending dropsy, then the exhibition of Tonics & astringents are the most valuable medicines. I once was consulted on a case of Typhus fever attended with a dropsy of the testes. The surgeon who attended insisted on an operation being performed but I opposed it on the grounds of this disease of the testicles being a ~~disease~~ consequence of the original disease Typhus, & that a removal of the topical affection was not necessary as it would disappear when the Typhus was cured. According my opinion over ruled, & I began by stimulating the patient with wine & bark Camphor &c. & in the course of a few days it had the happiest effect, the Patient soon recovered of his Typhus & the disease of the testicle was as speedily removed.

November 20th

General View of astringents in particular diseases. Astringents have been recommended in

All ages in excessive evacuations, particularly in hemorrhages of red blood. Dr. Cullen says that he has been much disappointed in the treatment of hemorrhages with astringents. Hemorrhages may be divided into active & passive as used by Stahl or hemorrhages depending on great & weak morbid action of the blood vessels, in the former astringents are always injurious without previous evacuation, but in the latter astringents are often used with advantage. The sugar of lead is useful in form of active hemorrhage.

Epistaxis is 99 times out of 100 an active hemorrhage. I believe the sugar of lead to be the most active article in the whole Nat. Medicine in the treatment of hemorrhages. Upon the whole astringents are the most indispensable remedies in the whole treatment of hemorrhages from the nose, lungs, stomach, intestines & uterus, but I have frequently remarked that we often fail with the most power astringents, when with the weaker ones we succeed; this is particularly the case with Opium & opium, I have often succeeded in curing a diarrhea with these latter medicines, when the most powerful astringents has been used without effect.

Diarrhea & Dysentery often arise from the same remote cause, but in general the two diseases require very different remedies. The Dysentery I think is often excited by an inflammatory state of the mucous membrane of the bowels, & of consequence this disease more frequently requires bleeding less diet &c. than astringents. Recent purgatives in the first stage of Dysentery frequently effects a cure, but this is not done by any purging that is excited. I know a whole family that was cured of a troublesome Dysentery, by eating a small quantity of the choke cherry, so called because it produces a congestion of the throat & mouth like the persimmon.

The bark when it purges is useful in recent Dysentery, but in general the practice is hazardous & extremely injurious. When the Dysentery puts the Inter. or remittant form, then bark is often the best remedy. Diarrhoea is often accompanied with some febrile disease, in these cases, the common astringents ^{never} fail of doing harm, & in general my practice has been more successful by bleeding blistering low diet &c in arthritic Diarrhoea astringents always do harm, because it is generally accompanied with fever. Snapsisms applied to the feet are of great service. In the disease of females called fluor albus or whites, there is a mucous white or yellow substance like flowers of sulphur discharged from the vagina. The use of astringents has been much practised, but often to disadvantage. Dr. Darwin has very properly made distinction of this disease into fluor calidus & frigidus, in the first of these there is much febrile action, & astringents are always injurious, it is to be treated with bleeding blistering &c. A blister to the back is the best remedy with which I am acquainted. Low diet & the other usual antiphlogistic regimen. But in the other species astringents are often the only remedies used with advantage. It is not to be distinguished from Gonorrhoea in many instances. In diabetis astringents often do harm, particularly if there accompanies the disease a tense & quick pulse. A burning in the region of the kidneys, attended with great thirst & fever. And in pyrosis or water brash astringents are often of use. The sweats so troublesome in Phthisis pulmonalis are often relieved by astringents. In chronic inflammatory ophthalmia, they are often indispensable. Astringents have often been used in calculi in the bladder, but I believe not so often with advantage. Dr. Cullen's theory respecting the action of astringents in preventing calculi, is certainly very erroneous, altho I do not admit that astringents generally are of much use in calculi of the bladder. yet I must, that the Uvae Ursi has often been used with evident advantage in the treatment of that disease.

November 21th-----

Astringents Dr. Cullen treats of astringents as divided derived from the vegetable & mineral kingdoms, this quality resides most generally in the bark. Dr. Cullen arranges astringents according to their botanical affinity, I shall arrange them differently beginning with the strongest & descend to the weakest. The various species of oak bark are astringent as is found in tanning, the decoction of oak bark is useful in inflammatory affections of the mucous membrane that lines the fauces; It has been used in Inter-
=al to the Peruvian bark, there is some difference in opinion with respect to the kind of oak bark that is best. I am of the opinion that the Spanish & Chesnut oak are the best. The Galls of the oak are a peculiar excrements growing from the leaves, they are occasioned by an insect mauling the leaf, from which the juice exudes & cristallizes, it is remarkable that there are two kinds of insects the one mauling the upper part of the leaf the other the lower. Galls are destitute of smell, has a styptic taste, both spirits & water extract the astringent matter. They have been used in many diseases they have been used in France in Intermitents, they do not increase the heat of the System as bark. The dose is from 10 grs to one ʒi; we are likewise informed that in a relaxed state of the bowels, Galls are used without producing costiveness. Dr. Cullen recommends Galls in the piles, he directs equal quantity of Galls & Hogs lard, but I have found equal parts to be too large a quantity of the Galls. I generally use two drams of Galls to 1 ʒ of lard. I have found this an excellent remedy in piles without febrile action, but when febrile action exists we must use bleeding purging &c.

In 1793 during the yellow fever in this city I found the piles a very frequent symptom in those who had never had them before, I called it hemorrhoidal proctenteria, in those cases Galls could have been a very bad remedy; the piles was a premonitory symptom of yellow fever with myself in 93 & 60 more I attended after my recovery. In cases of galls the infusion or decoction of Galls have been found very useful & even in Gonorrhoea in the latter stage. In cases of the most obstinate diarrhoea I have used a decoction of Galls with the most evident advantage I prepare it in the following manner To a pound of water is added $\frac{1}{2}$ oz of Galls, boil it for some time & then strain it, one table spoon full is to be given to an adult, I generally add some Laud. & sometimes brandy, I have found it succeed where all other remedies fail. Gum Kino is a powerful astringent, there is two or three kinds of trees from which we obtain kino one in Africa & another in north Carolina & Georgia. Gum Kino is destitute of smell, water & spirits of wine dissolve it, Iathergil this article in intermittents. I have it frequently, I seldom prescribe less than a dram in 24 hours. In Diarrhoea I generally mix Laud. with it, I have succeeded in curing Intermittents with it in some cases where the bark failed, but it failed where the bark succeeded. I succeeded in curing an Intermittent ~~xxx~~ in this city with kino combined with gentian & opium when the bark & arsenic failed. Dr. Cullen speaks favorably of kino in curing Diarrhoea uterine hemorrhages & fluxus albus, but he failed in curing fluxus albus with it; A late German writer uses Galls with lime water, injected into the uterus in hemorrhages.

November 22th.

The extract of Catechu is difficult to be distinguished from kino, it is of a dark red colour, of a bitter taste when pure it may be dissolved in water, but it does dissolve so well as in spirits. It is not so frequently used in this country as in Europe. It is used in diarrhoea. Dysenteries fluxus albus & uterine Hemorrhages, it is sometimes used in combination with alum. U.S.C.C.P. or Misetto it is found attached to the apple, the Gum & the oak, it is more worthy of our attention as an article of Natural History Mat. Medica. It is possessed of the same virtues from whatever tree it grows, the whole of the misetto has been used but the bark most commonly along with the astringency it possesses bitterness. The misetto has been recommended in Intermittants Sir John Layer has succeeded in curing quartans with it, it has highly ^{been} recommended in Epilepsy. Dr. Cullen found it useful in those cases of Epilepsy depending upon increased mobility, these cases is not often found in the United States. The excellent Dr. Ferri of Edinburg has cured one case of Epilepsy with it. Geranium Maculatum or crane feet, the root of this plant is a powerful astringent, not inferior to galls a decoction of it has been much used in Cholera. mixed We place too much confidence in Laudanum & Chalk gulip in Cholera. The Tarmentil has not been found in America, it is a powerful astringent, it is used in tanning. In Intermittants it has been used as a substitute for bark.

Dr. Cullen has succeeded in curing Intermittents with it, when the bark failed. It has been used to prevent abortion & I have no doubt with advantage in those cases of relaxation of the Uterus, which is often the cause of abortion. There generally accompanies a relaxation of the Uterus & affection of the arterial system.

Cortex Granatum is a powerful astringent, it has succeeded in curing hemorrhages when more powerful astringents have failed.

Urtica Urtica or urticale hairy is common to the new & old world, when the leaves are put into the mouth it has a styptic taste, the woody part is nearly destitute of taste, the leaves contain more gum than resin it has little effect on the pulse. Mixed with sulphate of Iron it produces a black colour it is of use in fluxus albus. It is an excellent remedy in old cases of Gonorrhoea - I have cured long standing Gonorrhoea with it when every other remedy failed, & when the System was so irritable as not to allow injections, I make a strong decoction of it & direct the Patient to drink it frequently & to chew the leaves - I do not think it proper in recent cases of Gonorrhoea. I think it has an Idiopathic effect upon the bladder, & it is an excellent remedy in calculus. It has been recommended in Consumption in England, but as its efficacy in this disease I cannot say much, as I have never used it. It has been used in Diabetes & Diarrhoea with evident advantage.

November 25th 11.

Rheulia Tinctorum madder I have not a very high opinion of this medicine as an astringent, as an Emenagogue I shall treat of it when I come to that class of medicines. It is worthy of your attention as it is a valuable colouring matter, it tinges the leaves

of a red colour, it communicates a red colour to other animals as birds &c. By feeding a young pig with madder you will be able to ascertain how fast it grows, as it tinges the bones while you feed it upon it; & by discontinuing it they will regain their colour. The colouring matter passes through the circulation & is taken up by the absorbents & dissolved in the serum of the blood. Cows fed upon madder renders their milk of a red colour for two or three days. Mr. found the cartilages & the nails coloured with madder, from this fact we may conclude that cartilages & nails are organized. The bones of many animals cannot be coloured by madder as the Hoofed the crocodiles &c. The extreme facility with which it is taken up by the absorbents renders it an useful test to prove whether cutaneous absorption takes place or not. I am doubtful whether it does or not, it has been recommended in gonorrhoea & Pickets.

Yellow resin from Botany bay unknown to me is said to be an astringent.

Allum occurs in many parts of Maryland & Pennsylvania, for its chemical history I refer you to the Professor of that branch of medicine. It is not a sulphate of alumine as it is generally called, but a Supersulphate of alumine with Potash, Ammonia sometimes enters into the composition of alum was formerly supposed to enter into the composition of mineral waters, but Sulphate of Iron has often been mistaken for allum. It is a powerful astringent, & it has been much used both internally & externally, It has been lately used

some countries for tanning leather I shall speak of it first as an internal medicine. It has been recommended in Intermittents in combination with aromatics & it succeeded when the bark. Dr. Cullen used it in combination with canela alba in Intermittents with success. Dr. Chambers of South Carolina used it in putrid bilious fevers with advantage. I have used allum combined with Gentian in Inter. & it has succeeded when bark failed. In Cholera infantum & Diarrhea Allum has been highly recommended, in Cholera with delirium allum with opium has been a useful remedy. In no disease has allum been more used than in Hemoptesis but Dr. Cullen says that he has not generally found it useful in this disease, in some other Hemorrhages as in Uterine, it promises to be an useful remedy. Dr. Thompson has recommended Allum & Sanguis Draconis in frequent Menstruation, it often requires the most treatment, the Stimulating plan will not succeed. It occurs more frequently in this climate than in Europe I must attribute it to more frequent & general use of animal food & coffee, In this disease I use 1 part of allum to 2 of Gallic if it purges I give opium. Dr. Mead has recommended allum in Diabetes Dr. Meier has succeeded in curing one case of Diabetes with allum, in Diabetes I do not believe to proper at least at the commencement of the external application of allum, it has been used in affections of the tonsils with advantage, it has been used in putrid sore throat with good effect, in some cases of ophthalmia it has been found to cure when other remedies fail. Allum with the white of an egg is a good remedy in ophthalmia, it was found particularly useful in the Epidemic ophthalmia that prevailed two years ago, it coagulates milk & the serum blood. The doses of allum as recommended by Dr. Cullen,

is from 3 to 10 up to 20 grs. It is best to give it in small doses, often repeated, it sometimes purges & we are under the necessity of combining opium with it, it has little effect upon the pulse—

Armenian Bole is an astringent, but its astringency is owing principally to the album it contains—

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for November 27th

Lead & its preparations, I have been ~~at~~ a little at a loss where to place it, whether among the Tonics or astringents, Dr. Cullen placed it among the astringents, probably it might be more properly placed among the Tonics, I have in some of my former lectures arranged it among the Tonics, but I shall now place it among the astringents. If I gave a place to a class of Torpentia or Sedantia it would be more properly arranged among them. Lead melts at 594° of Fahrenheit's height, it boils at a greater heat & if the heat be continued Plumbumustum is formed, still continued red lead or Minium if longer a glass, Litharge. It is universally diffused through the earth & few countries contain more than America. The white lead is a carbonate of lead, it is made by exposing lead to the fumes of Vinegar. Sugar of lead is a super acetate of lead, it has a sweet taste, when taken into the mouth it produces a copious flow of saliva. Of the External application of lead & when taken into the Stomach. The Colic Picnum or Colic Saturninum is produced from the vapours of lead, & palsy of the limbs, this disease is often produced by drinking cider rum & wine adulterated with sugar of lead which is a common practice with some wine merchants, to give it a sweet taste. Painters & printers are subject to the Colic Picnum it requires to be exposed for some time to lead before

This disease is produced. I have known ladies affected with head ache & other disagreeable symptoms from a newly painted house - Cure Bloodletting is not often necessary in this disease, altho the fever run high, purging, cream of tartar is a good cathartic Castor oil is often indispensable, Calomel is a good purge, opium is often necessary, but not before previous evacuation. Opium sometimes proves cathartic, Gum Guaiacum Warm bath - Salivation is often found necessary - Rheumatism is sometimes brought on by lead. I am somewhat at a loss to determine how lead acts in producing the Calico Pictinum in painters & Printers &c - I have been informed by a painter in this city that he gives his workmen fat pork to prevent the deleterious effects of lead. If this acts as a preventative I think lead must act externally & is taken up by the absorbents - I have likewise been informed that men who work in lead mines anoint their bodies with hog's lard to prevent the bad effects of lead. I have to add that the number of painters affected are not more than 1 to 80 or 100 - Cold water thrown on the extremities proved cathartic in a patient in the Hospital after strong purges had been given without operating. Dr. of South Carolina informs me that the inhalation of milk upon scutlets & use it in cases of hair loss without any disadvantage. Garlands extract has often been used externally in a poultice in hernia humeralis - It is sometimes used by the Ladies for lumps on the face, In inflammation of the Tarsis the Sugar of lead is as proper as the white Vitriol, this is more proper in inflammation from external causes than internal - Sugar of lead is daily used in gonorrhoea & much too strong 10grs to 8 or 10 grs of water is of a proper strength in recent cases - In burns lead is often used but it ought not to be used too long -

November 28th 1812

Lead taken internally. The tonic power of the sugar of lead appears to be established by its curing intermittents. - Etzmüller has used it in combination with sal ammoniac & Laud. in Intermittents with success - & as we often meet with cases, where the bark & arsenic fail, then we should make trial of the sugar of lead - according to Dr. Gregory the sugar of lead is a good remedy in Epilepsy in Infants of its efficacy in this disease I can say but little I saw one case where it was tried with little advantage, it was in the Pennsylvania Hospital, he was afterwards cured with Stramonium - In pertussis it has been sometimes used with advantage, but in this disease it will be necessary to use the lead for some time & consequently I do not recommend it; for I hold it as a uniform fact that where lead has been used for any length of time it is invariably injurious. - The late Mr. John Hunter conceived Tetanus to be a disease of great increased or inordinate action hence he says that the sugar of lead given internally & the Patient placed in an icehouse has effected a cure - on the supposition sedative effects of lead, as well as the Ice I should be fearful to imitate this practice of Mr. Hunter - It has been used in Melancholia Hypochondriasis & Nymphomania, but of its efficacy in those diseases I have had no experience - The celebrated Morgagni has used it in Melancholia with decided advantage - He recommends a long journey, but when this cannot be done conveniently, Sugar of lead says promises to be the most invaluable medicine in this disease - I have used sugar of lead internally in desperate cases of Gonorrhoea, but cannot say much in its favour I have it likewise in flux albus attended with fever with great advantage - Sugar of lead in combination

With opium has been used in Colera infantum with decided advantage. Dr. of Hampton Virginia gave a child 4 grs in 24 hours in Colera infantum & effected a cure after every other remedy had failed, but I would not advise such large doses to a child. In the Diarrhoea which often occurs in the latter stage of remittent fever, lead has been used by self with success after Gall & opium fail. When the diarrhoea is kept up by a latent fever of the intestines it is a very proper remedy. In Dysentery the lead has ^{not} been used with so much success; Where much blood is discharged it would be proper in my opinion, especially in combination with opium. In the exhibition of the sugar of lead you may lay it down as a general rule, that if its good effects are not soon observable, it ought to be omitted for it will endanger the Patient's life. In Pyrosis the sugar of lead promises to be a valuable medicine, I have used it with great certainty in checking Salivation. In the most violent case of Epistaxis I ever saw, I gave 8 grs. of the sugar of lead with one of opium, which succeeded in putting a stop to the hemorrhage in less than half an hour, the next morning the Patient was well & his bleeding did not return. It is certain Gentl. that the danger of giving lead has been greatly exaggerated & from the account I have given of it I hope you will be induced to give it a fair trial.

November 30th. 1812 —

I shall make some further observations on the use of lead in hemorrhages. May not the preparation of lead be used with a view to prevent abortion. I was called to visit a lady of this city who was nearly sinking under a profuse hemorrhage from the uterus she was at that time in her sixth month of pregnancy nearly pulseless. I immediately gave her 3 grs. of the sugar of lead with 1 grs. of opium, the bleeding was soon checked.

In 5 minutes her pulse rose, & in a short time after she recovered without the assistance of any other remedy, and at the usual time she was delivered of a fine healthy Child.

Mr. Burns asserts that where lead is of service in uterine hemorrhages it generally produces sickness, but this I can safely contradict, & even when I have continued the Opium with the lead it has had the happiest effects & without producing any nausea whatever.

It may be necessary before dismissing the subject of lead to enquire, ^{into} its *modus operandi*, this I shall do with much hesitation, because I have not yet fully made up my mind on the subject. In hemorrhages of the active kind to which the lead is mostly adapted, it is observed that the heat of the body is greatly diminished & that the pulse is much less active: from these considerations I am induced to believe that lead acts by reducing the activity of the pulse. And from its good effects in passive hemorrhages, I am inclined to believe that it also acts in some measure by its astringent qualities. Dr. Thomas Smith made the following experiment on several living animals, & which I confess has very much attracted my attention, he exposed the cut extremities of a cut nerve to a strong solution of ~~lead~~ common salt & immediately the whole limb was violently agitated with convulsions, he then had the parts well washed with solution of the Sugar of lead & the convulsion very soon ceased, the solution salt. was again applied & produced the same effect as before & again the solution of lead quieted the struggles of the animal.

This repetition & recurrence of action proves very fairly that the life of the parts was not extinguished. In the exhibition of the sugar of lead you must be regulated by the nature of this disease & the age of the Patient: the minimum dose is 2 grs Medium 5 grs & the

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Maximum 8 grs. - The largest dose I ever gave was 8 grs. & this was in a case of Epistaxis of which I have before mentioned. I have always observed that where lead was given in combination with opium it was much less liable to produce such effects or any injurious effect, with this article I shall conclude the class of astringents.

Tonics. Some writers object to the term tonic because they consider it more properly applied to bracing a lax instrument as a violin &c. - Among these are Darwin Gregory & Seneca, but their objection seems not of much importance. Darwin classes it among his Sarcientia. Gregory thinks they ought to be called roborantia. - Therefore, I shall sometimes use one of these terms & at other times the other, but I shall call them more generally Tonics, which imparts general or partial strength to the system. By Tonics I mean those articles or means which when taken internally impart a partial or general strength to the whole system. I know that some authors have classed wine alcohol & ardent spirits with the Tonics, but this I think is incorrect because their operation is very diffusible & very transient, I shall therefore treat of these articles under another head.

December 3rd 1812 -

Of Tonics the term Sarcientia Darwin ought not to be retained, because it is founded on a wrong principal, but Tonics should be retained.

I agree with Dr. Cullen - That many of the bitter medicines possess a tonic power, but I cannot consent with the Dr. that bitterness is a necessary constituent principal in a tonic, because there are many substances that possess not the smallest tonic power.

As opium Digitalis &c. that are never the less bitter
 again all the preparation of Iron Zinc Arsenic copper
 & particularly the sulphur ammoniacum are destitute
 of bitterness, yet they are our most valuable Tonics
 Some of the Vegetable astringents are not bitter as
 Galls, which are often successful in curing Inter.
 from these I conclude, that the tonic property of medicines
 does not consist exclusively in a bitter or any other
 uncombined principle, but in the junction of
 many articles of which we are not acquainted.
 Excitation in the open air & a well regulated
 diet are sometimes the best of tonics. And yet their
 operation can not be ascribed to any one property of
 matter, because the gratification of the Venereal appetite
 has certainly sometimes a tonic power. A Gentle of this
 City who was affected with Epilepsy assured me
 that the paroxysms of his disease were always protracted
 & lighter when he indulged himself with his girl.
 Joy is indeed with a tonic power & has been known to
 cure Intermittents. We have numerous instances
 of hope supporting aged people during the absence of a
 friend or relation, & when the object of their wishes has
 been accomplished they suddenly died. The tonic
 power sometimes consists in the stimulus of heat, for the
 warm bath is immensely entitled to the name of tonic.
 The peruvian bark is both bitter & astringent,
 its Tonic power may be increased by adding Cam-
 -phor & Seneka with it. The most of the Tonics are
 stimulents, some another are of the opinion that Tonics
 operate exclusively on the muscular System, that
 they act on the Nervous System is certain from the
 effects they have on the Brain producing exhilaration.
 But Dr. Brown is of the opinion they act on all
 animated matter that raises irritability or sensi-
 -bility & particularly on the Tela cellulosa which
 he supposed pervades & gives firmness to all the soft

Part of the lady Dr Bullen asserts that the pure tonic does not stimulate, but this is incorrect, I am acquainted with no tonic whether fossil or vegetable, that does not in some degree exhilarate the pulse. yet I grant that some articles may be so managed as not to operate in this manner, for example in the summer season my stomach is in a debilitated state & a copious ejection of flatus takes place, now if I take a draught of cold water or eat an ice cream I am instantly relieved, in this case the vessel of the stomach morbidly excited & the water or cream operates as a tonic by equalizing the excitement. Dr Bullen says that latter do not increase the frequency of the pulse, but I am of a contrary opinion - many medicines have great effect on the system but little on the pulse as the *Mua ursi* - We are not always to judge of the tonic powers of any medicine by the effect on the pulse. Balsam is a very good tonic, yet its operation on the pulse is very inconsiderable - The doctrine of Sylvester Douglas Brown & others, that the sedatives always according to their former previous Stimulant effect is certainly erroneous, which I shall endeavour to prove hereafter -

December 6th -

Of the diseases in which Bitters are employed Bitters have been recommended as an external application in foul ulcers, Scorbuts, Gums & in gangrene; they have been supposed to operate by their antiseptic powers. But from my own experience I cannot recommend them & in cases of gangrene they often do mischief, particularly when there is much febrile action. Bitters have been used in discharging Scrophulous tumors, but I believe with Dr Bullen, that they have not been used with advantage. The latter medicines have been used by almost every practitioner in diseases of the stomach & in many cases they have no doubt been judiciously applied - But the Theory of their operation in Dyspepsia is not as Dr Bullen, supposed, to give tone to the muscular fibres,

of the Stomach. In visceral obstructions bitters are often used. & I believe sometimes with advantage particularly in habitual constipation originating from a want of action in the Intestinal canal. Many of the bitters act as diuretics & are particularly useful in Dropsy & Oedema. They are often used successfully to prevent the paroxysms of Intermittents, but the medicines most successful in curing intermittents is the Cortex Peruv. which is both bitter & astringent. In malignant fevers bitters have been highly recommended, but I think they are not always successfully & in the first stage of these diseases they evidently do mischief by their stimulating qualities, yet I must acknowledge that after the inflammatory stage has been subdued depletion, bitters & particularly Chamomile & Gentian have been used with advantage. The purest bitters have been used to excite Diaphoresis but I believe with Dr. Cullen they are seldom serviceable unless when assisted by the Sudorific Regimen. Bitters have been recommended in Rickets, & Sir John Floyer tells us that the practice of wearing boots irrigated from the deformity produced by this disease. Dr. Cullen recommends the use of bitters in Chlorosis, but I find that in the cases in which they have been successfully employed, they were generally used in combination with steel or some of the metallic tonics. Bitters as anthelmentics do not appear to be entitled to our attention, because worms will live sometimes immersed in an infusion of the strongest bitters. Bitters have been recommended in inflammatory Gout & Nephritis. If they have been serviceable in these diseases, they operate by exciting artificial fever, & not as Dr. Cullen supposed by going to the Muscular fibres of the Stomach. Dr. Barton says that inflammatory Gout & Nephritis often alternate with each other.

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December 7th

Of Tonics. The diseases in which tonics are used constitute a large proportion of the diseases to which we are liable to, they are derived from vegetables & Metals, I shall commence with the latter, from Vegetable Kingdom, such as those which are uncombined with astringency or any aromatic properties.

Of Gentian, there are many species of Gentian, but the Gentiana lutea of Senecio, not found in America is the kind which we shall treat of principally, Dr. Faller says the yellow Gentian has a very strong smell, its virtues are extracted both by spiritus & watery menstrua. it is a simple pure bitter, it is one of the most valuable we are acquainted with, It has been recommended in affection of the liver, in nervous affections. The debility of the Stomach which is so often observed in the fevers of warm climates, is effectually removed by the use of Gentian. It appears to operate by removing the disposition of the stomach to form too much acid in the Stomach. The Elixer Stomachica of Dr. Murry is much celebrated in the cure of Inter., but I suspect that the white Vitriol of the compound is the most active article in the Elixer. Gentian is an article of the compound in the celebrated Portland powder, & it certainly has been used with advantage in preventing the paroxysms of Gout. Dr. Cullen says that he has never saw a case of Inter. fever which would not yield to gentian in combination with Galles or Tormentill, I have been accustomed to use the Gentian in form of powder & have always observed it to be more active in this way than when given in the form of a tincture or Infusion. The Gentiana angustifolia which is met with in many parts of Virginia & Pennsylvania, I believe to possess all the virtues of the common shop Gentian in an eminent degree. It may be known by its large & beautiful flowers its small leaves, by its growing

In moist places, by its stalk being very brittle & having no woody parts & by the root being very small. Columbo. This article has been found in the state of Ohio, but the ^{root} as well as the plant is very different from the Columbo of the shops. Dr. B. exhibited to the class some of the newly discovered Columbo. It has somewhat the appearance of Gentian root & the common parsnip. Its taste is sweetish & bitter, but not near so strong as that of Columbo Dr. B. supposes it to possess the same virtues as Gentian & Columbo of the shops.

Quassia. It grows in South America, it is a tree of a moderate size, quassia is a pure bitter, there are three species, Quassia Poligama, quassia amara & quassia Simarouba. They all used in the cure of Inter. The 2nd is generally preferred. The bark of the root is generally the most active part & in many cases it is not inferior to bark, it has been used in helious & putrid Fevers, & I believe with evident advantage. In Epileptic Hysteria & in Gout I can add but little to its reputation & in the paroxysms of the latter it is universally injurious. The quassia has been decarried in Dyspepsia, one of the most important preparations of quassia is a watery infusion. Patients with Dyspep will continue its use longer without complaining than any other bitter. In bilious Diarrhea quassia in combination with Columbo is the best of the bitter Tonics. The depraved appetite in Chlorosis & particular the practice of eating dirt is effectually removed by a prudent use of one or other of these species of quassia.

December 10th 1812

Of Bitters Quassia Simarouba is a native of South America & the West Indies, it is a pure bitter without astringency, or aromatic properties, its virtues are

Extracted both by water & spirits, the cold water best.
It is said to possess some virtues, which the other species
do not, it has been particularly recommended in Dysentery.
This disease is said to have prevailed in France which resisted
all attempts to cure it untill it was discovered accident-
ally that the *Quassia Simarouba* was a sovereign remedy.
This medicine is not to be used in every stage of Dysentery
it is only in the third stage, when there is no fever & when the
tenesmus & gripes are kept up by a weakness of the
elementary canal. *Apurham* assures us that if it does not
show its good effects in three days it may be laid aside, but
other Physicians have found it of great service, after a much
longer time. *Monsieur* exhibited *Simarouba* in Diarrhea
with great advantage, but he says that he always found
it more effectual when given in combination with Laud.
Dr. Bullen says the virtues of this medicine have been
greatly exaggerated, & he has not found it to equal his expec-
tations in any case where he has tried. In cases of putrid
fever attended with a colliquative Diarrhea, *Simarouba*
has been highly recommended.

Columbo. I mean the article which we import
from the *Indo* country. It has been but a very few months
since we have discovered the plant which affords this root.
I had formerly conjectured that it was a species of *Gentian*
but I have been very much mistaken, it is obtained from
a species of *Murrum* in *Monsieur*, it grows in country
of *Mosambic* In Africa & not in the Island of *Ceylon* as
was formerly supposed. *Columbo* is a pure strong agreeable
bitter, it has somewhat of an aromatic taste, it gives out
its virtues to spirits or water, which proves that its
active matter resides in the resinous part. I agree with
Dr. Bullen that *Columbo* will not alter the putrescency
of the bile, of course its inferior to bark in the bilious
disease, but it has some advantage over the bark &
motherroot, in being less stimulant & may be given

With less danger in febrile diseases. Columbo like other bitters have been used to prevent the paroxysms of Intermittents, but it is certainly inferior to bark. I admit that there are some cases of delicate constitutions in which the bark cannot be employed & the Columbo may be prescribed with advantage. In cases of Pulmonary Affect, I have used this medicine in the form of a watery infusion with greatest success: but I have always found it necessary to attend to the state of the pulse & avoid giving it in the time of a paroxysm. Dr. Bullen says that Columbo is the most invaluable tonic in the cure of Dyspepsia, I shall not contradict the Dr. but in general I find it necessary to give it in large doses, in substance & long continued, I have generally used it in combination with Iron, but I do not find it superior to Gentian with Iron. Dr. Bullen is of the opinion that Columbo acts as an antispasmodic in curing Dysentery, but he confesses that it ought be used in the latter stage of this disease. It is not generally proper to use this medicine in the commencement, but I must confess that I have carried purging too far in some cases of Dysenteria. In the Diarrhoea & Vomiting of children, during dentition, the Columbo is an excellent medicine. I have never known any inconvenience from too large a dose of this medicine except in one instance, this was in a lady of this City, who after taking too large a dose experienced a violent & painful constriction of the chest, attended with cardialgia. It must be observed that a watery infusion of this medicine cannot be preserved longer than 24 hours, especially in the summer season. After the Columbo I have beg you will set down the three following articles which are not mentioned in any author on the Materia Medica & their virtues

Are near to those of Columbo than any other of the bitters
 viz- the gantheria apifolia, Hydrocotyle californica or yellow
 root & the Helianthus Trifolia, the first grows near James
 River in Virginia & North Carolina, the root of this plant
 is intensely bitter, the bark is generally used, it is adap-
 ted to all cases in which in which bitters are used. The
 second is a small herbaceous plant found near this city
 its virtues nearly resemble the first, I shall only note that
 a Gentle of this city found this medicine to relieve his of
 Dyspepsia after every other bitter failed. The third
 is found in many part of the Southern states, this is
 a pure & agreeable bitter & has been found to be
 particularly adapted to the cure of the apthas of
 Seamen, of these medicines I shall say more fully
 hereafter-

December 17th - 1812 -

You will be surprised at my speaking of Rheubarb
 in this place, I have found a cold infusion of this
 medicine, ^{one} of the best Tonics in the treatment
 of Dyspepsia & many other diseases of the Stomach
 I have used it as a tonic without any regard
 to its other properties, and in no instance have
 I been disappointed. Lickia Islandmas This
 has lately obtained a great reputation in the cure
 of Phthisis Pulmonalis. It is very bitter & may be
 obtained from the mucilage, it is absorbed & taken
 into the circulation, for we have the best authority
 for asserting that the milk of women giving suck
 is affected with in such a manner, that the child
 refuses the breasts. Icelandmas contains a great deal
 of Mucilage. One once boiled $\frac{1}{4}$ of an hour in a quantity
 of water yields more mucilage than three ounces
 of Gum arabic - Dr. recommends a half pint
 of the decoction of this article in milk to be given
 to a consumptive patient every morning & evening.

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It has cured one case of Hemoptesis, it is best in
Consumption without inflammatory symptoms.
It is said to increase the appetite, It is considerably
nutritious & in those cases of Consumption where
Dr. Gullen & Sydenham recommends Gestation I
have no doubt but this medicine might be used
with considerable advantage.

I have had no experience of the efficacy of this
medicine in Consumption, but the authorities
in its favour are more numerous than that
of any other medicine, but I think there is
not much praise due, this medicine as has
been stated. A Physician in this City, who
has been more successful in the treatment
of Phthisis, Pulmonalis than any Physician
I am acquainted with commenced with small
doses of Ipecacuanha, three or four times a day
& by restricting his patients to a Vegetable
diet. In this manner he has often succeeded: but
I expect that the regular attention to diet affected
more than any thing he made use of. It has
been much used in Boston & Richmond.

Anthemis Nobilis Chamaemile has a
strong grateful smell & bitter taste, the leaves of
this plant are sometimes used, they are very bitter
& afford on distillation an essential oil: but
they are very inferior in strength to the flowers,
they have been often used for the cure of Intermittents
Before the discovery of bark And Bergius speaks of this
medicine in the highest terms, but since the
discovery of the Peruvian Bark Physicians of late
scarcely ever employed it in Bilious diseases.
Sir John Pringle found them useful in relieving
the Dysentery.

Tanacetum Vulgare Common Tansey. This has
a very strong smell & is intensely bitter, a weak infusion
- one of Tansey has ^{been} highly recommended by Dr. Clark of
Edinburgh as a valuable medicine to protract the
Paroxysms of Gout: but Dr. Cullen says that he has
not found it of the least service in case that he has used it.

Artemisia Absinthia wormwood, this article
is so very bitter, that its taste is very perceptible in
the milk of mares, & the flesh of sheep feeding on it
cannot be eaten, this completely establishest its descrip-
- tion, the leaves of the wormwood is more bitter
than the flowers - An essential oil is obtained from
from wormwood, but it does not possess the
virtues of the plant, because it is not bitter.

Dr. Sine. asserts that wormwood is considerably
narcotic, he never took it but he gets a pain in
his head & an inclination to go to sleep. Dr. Cullen
I think very justly attributes this effect to a
peculiar Idiosyncrasy. I knew a Gentleman of
this City who took a little wormwood for a pain
in his Stomach & in a very short time he gets a
burning on discharging his water, & perceived shortly
after a discharge similar on every respect to Gonorr-
- hea, but as soon as the wormwood ceases to have
effect the discharge speedily stopped. He tried the
same experiment, three weeks after; & with the
precisely the same result, this was a transitation of
Gout in my opinion - I shall now proceed
to speak of those articles which are both bitter &
astringent & first of Bark, I need not tell you
that this is the most important article in the
Materia Medica, it was unknown before the discove-
- ry of America, a few years ago there was only two
species known, there are now from 14-15 to 20 kinds

But I shall not enumerate them because their properties are very little known. The three following are the only kinds that are generally known viz. The Cinchona Lancifolia or officinalis of Senecus. Cin. oblongifolia & the Cin. cordifolia. The first is the pale bark of the Shaps used by Sydenham & others, the leaves are small & grows in South America. The second the red bark, the tree from it is attained grows 120 feet high in Peru. And the third is the yellow bark, this is obtained from a small tree 14 or 15 feet high in Peru, the oldest always affords the best, the trunk of the tree affords better bark than the branches, & these last better than the twigs. The bark well dried & broken into small pieces may be preserved many years, provided it be kept from moisture, & even improve in its virtues—

December 18th ---
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We yesterday spoke of a number of species of bark, it is not necessary to remember more than three, it is remarkable its bitter properties, which remain in the mouth for some time, it is considerably astringent with a small degree of aromatic properties. Red bark is more soluble in spirituous menstrua, than the other species it is said to be more antiseptic, but this I doubt, an infusion communicates a red colour to blue paper, an infusion of it is not rendered black by Sulphate of Iron. We shall probably never be able to discover the properties of bark by chemical analysis, there has been many attempts to discover that qualities which gives it its Felixperge properties—

But all of our attempts have been hitherto abortive.

The real bark is more apt to disagree with the stomach than the other Species especially when there is disposition to vomit: Dr. Sequin has strenuously asserted that an extract can be obtained from the bark which possesses all its tonic properties, and that the active matter of extract consists of gluten or glue, but the Dr. has certainly been mistaken, for the same kind of substance can be obtained from kino & black pepper, which apparently does not possess in part the virtues of the bark.

Its operation on the Stomach convinces us of its Tonic powers, & its use in Dyspepsia is I suppose known to you all - Dr. Cullen supposes that a simple loss of tone in the muscular fibres of the Stomach gives rise to Dyspepsia, but I think it more probable that a debility or disordered action of the vessels secreting the gastric juice effects much more in producing the disease - The bark is one of the best remedies in the treatment of bilious & Inter. fevers: Its good effects are so universally known that I need only mention the proper time for its exhibition, there has been many disputes about this subject, some writers affirm that when the bark is given too early, the paroxysms are either exaggerated or that jaundice or Dropsy ensue of considerable consequence - But the practice of Dr. Lind - has not confirmed the above assertion, he found that in 200 Patients cured of the Inter. fever to whom the bark was given early & in large quantities, in not one instance did jaundice or Dropsy ensue, & in those who did not use the bark early, the Dropsy was very frequent, I believe the simplest Intermittent, frequently partakes in

Some measure of an inflammatory disease, & particularly those that occur in the Spring of year, & require bleeding & therefore you will perceive I am not an advocate for an early exhibition of the bark. There is certainly some exceptions to this rule, for instance where the Patient is excessively weak, or where the disease is so very malignant, that we have reason to believe that a very few paroxysms, will terminate the existence of Patient, as I have seen in this city where the bark was not given after the first paroxysm, the second terminated in death. It is in general most safe to begin the cure of Inter. by abstracting a little blood, particularly where the Patient is Vigorous & discovers a disposition to fever. I have known some fevers of this kind so obstinate as to require 8 bleedings & afterwards to require the bark. It is very customary to begin the cure of Inter. by exhibiting an Emetic or Cathartic, & I don't think the practice ahead one I prefer Cathartics, when you conclude on giving a purge, the following one is a very excellent one. Rx from 15 to 25 grs of Rhubarb & 5 or 6 grs of Calomel to be given at once or a scruple of the powder of mag apple root either of these purges is far preferable to the common one of Jalap as being less apt to excite nausea or vomiting. I prefer purges to Emetics because after their action the Stomach remains a long time very irritable bark combined with a small proportion of Mercury is one of the best medicines in removing the swellings of the spleen which so often occurs after Intermittents. In Britain the bark was given just before the expected paroxysm, this was the practice of Sydenham.

The best time for exhibiting the bark is certainly in the complete apyrexia, & the practice of some Physicians in giving bark just before the accession of the paroxysm is a very bad one because at that time, the stomach is very irritable & the bark never fail to increase the fever—

December 20th

Dr. Home of Edinburgh used to give the bark immediately after the hot stage of fever subsided, & at the commencement of the febrile stage. Dr. Home's intention for giving the bark so early was, that might have time to be taken into the circulation, for he supposes that the bark does not act on the solids alone, but its effects are owing principally to parts which is also true—We are often disappointed in the cure of quartan agues by the exhibition of bark, but Dr. Ferriaroli says that this owing chiefly to our giving it at the wrong time, he says that he has very generally succeeded by giving $\frac{1}{4}$ of an ounce immediately before the accession of the paroxysm. May the bark be given during the hot stage of an Inter. If we may credit the assertion of Dr. Clark Balfour & many other respectable authors says the hot stage is the most proper time for the exhibition of the bark. Dr. Balfour says that he gave the bark in a putrid remittent intestinal fever which occurred at Bengal during the most febrile stage of the disease, & always with considerable advantage, but in my own practice I have given the bark just before the hot fit & I universally found it to increase the disease. I have heard of but one Physician who has given the bark in the fever—Upon the whole it is more safe to give it, ⁱⁿ warm climates during the hot stage of fever, than in our climate—

(40)

And this may alter our indication very much. I believe it to be a good general rule, that if the tongue & skin be moist the bark may be given with perfect safety, but on the contrary if they be hot & perfectly free from moisture, the exhibition of it will always be attended with danger - The state of the tongue is often of more importance to be attended to than the pulse in the treatment of Intermitants. Thus in the Typhus fever which I believe to be a species of Intermitant, the exhibition of bark & Volatil alkali, while the tongue is dry & bare, & the skin very warm with other symptoms of Violent fever, never fails to endanger the life of the Patient. I have as yet been speaking of the more simple Intermitants. I shall now say something of the use of bark in Inter. of a more malignant nature. There is a species of Intermitant fever attended with nearly all the symptoms of Apoplexy. In the pyrexia the Patient is completely insensible, the breathing is much disturbed, the pulse full strong & oppressed & the pupils of the eyes are sometimes very much dilated! This is what Sauvages calls the Typhus comatosus, but if were allowed to give it a name I should call it *Tatiana apoplectica* or *febris Inter. Apoplectica* - This disease is sometimes a very distinct Intermitant, & the Patient feels as well in the apyrexia as does when affected with the mildest inter. but it often happens that this disease partakes of a remittent & the Apyrexia is very indistinctly felt. - This is the most common form of the disease & is certainly the most dangerous. —

The cure is generally effected by copious bleeding, purging bilsters & the careful use of the bark. The bark was very seldom used by the older Physicians in remittent fevers, & indeed there is necessity for much more nicety in the management of these cases than any we have before spoken of.

I believe that Inter. Remittent & Typhus fevers originate often from the same cause & to be varieties of the one & the same disease. Typhus fever do not always originate from human effluvia, the disease often attacks persons very suddenly & put on all the symptoms of Intoxication from Spirituous liquors, the pulse at first is soft & full & often tense there is a determination of blood to the brain & the eyes appear very much injected with blood the bark in this stage of the disease is always hurtful, & it would be better to give first some of the milder stimuli as *Serpentaria* &c. - We should never venture to give the bark for several days, at least until there is a remission of the symptoms. European writers have not been nice enough in pointing out the apoplexy in Typhus fever, for when Delirium of a Phrenetic kind occurs redness & inflamed eyes together with convulsive twitchings &c. bark at this time never fails to increase the disease, here opium is the sovering remedy, but of this I shall say more hereafter. In Yellow Fever the bark is very often injurious but this has happened only from using it indiscriminately in all cases - for in the close of the autumnal months, when the disease puts on

The appearance of an Inter., the Patient will not recover without bark, and in the convalescence from yellow fever, the bark is often necessary to be given, Dr. Fortie says that the bark may be given with safety in every form of Inflammatory fever where the disease puts on the appearance of an Intermittant, this observation well worth our attention. Dr. Cullen's Synocha is an inflammatory affection it sometimes runs high, it is of a more continued form, than any mentioned, I have seen it continue for 4 days without any intermission & it is the only case, of fever that I ever saw continued so long without intermission — The Peste or Plague I have never seen, but I am of the opinion that it is the same disease as the yellow fever, the bark has been used in it with great advantage Mr. Senac in his invaluable essay on fevers, mentions a disease that is not uncommon under the name of Intermittant pleurisy, the pulse, in this disease often deceives us; & bleeding does harm & we often resort to cordials too late, when the disease is known it may be easily cured by a nice attention to giving the bark — Intermittants are often accompanied with catarrhal symptoms, the paroxysms cannot be distinguished from the cough — And indeed I have never seen a Catarrh which did not intermit this is the case particularly in Influenza; in this disease the bark is often necessary. In acute Rheumatism the bark has been used by some of the most respectable authors, particularly Moreau Fothergil & Haygarth, but we must receive their

Eulogiums on the bark with great caution. At the same time I must confess that I have enough of this disease to observe that Rheumatism does often put on the Remitt. & Inter form, particularly in the autumn, & these cases are often treated successfully by the bark.

December 21th 1812 -

Some Physicians believe that there is an intimate connection between Rheumatism & Gout & hence those who prescribe bark in one do in the other, but I shall endeavour to prove hereafter that Gout differs essentially from Rheumatism, both as respects its nature remote cause & method of treatment.

Notwithstanding this assertion I believe there are cases of irregular Gout attended with great debility but in the greatest part of the many cases which I have seen, the bark could not be used without some danger - I have observed this particularly when the Gout shows a disposition to shift its situation to the Stomach Lungs or Brains, upon the whole I think we shall meet with 50 cases of Rheumatism where the bark may be given with perfect safety where we shall meet one case of Gout that he said to require it. I know that I differ from Physicians of the greatest talents. The bark was used by Sydenham in Gout morning & evening. Gregory says that certain times may be given in Gout but that they should not be long continued. But it is my candid opinion that there are two diseases of the head in which the bark is a lowering remedy. Viz. Cephalgia & Hemiplegia Hemiplegia the first of them generally returns on the morning of every third day or every day & continues sometimes

With much violence, in this disease the bark has accomplished a cure when bleeding, blisters have died & all the antiphlogistic remedies failed, but you must observe that the bark is not to be given, except in the complete apyrexia—

In Hemisrania the disease attacks one side of the head only & usually returns once in 24 hours, the bark is found to be the only remedy, it is best to combine Calabar with it. In cases of wounds the bark is sometimes particularly adapted especially in those cases where the pain returns periodically. Rand a German Physician relates the case of a woman who got from a fight & had the scalp of the head very much torn, wound healed up in a short time, by the usual dressings, but the woman soon after complained of a violent pain Hemisrania, which went off after a certain time, but returned every second day, but during the intermission she was perfectly free from pain. The bark was prescribed in this case & with complete success. I attended not long since a little boy who had received a wound in the arm with a knife, in consultation with Dr. Physick & Minister the child complained of excruciating pain the limb was very much swollen, on account of the blood escaping in into the cellular substance, the leg was so bad, that amputation was seriously thought of but which however was not done, a little laudanum was prescribed, & the Patient very soon got well but what was particularly remarkable in this case was that the pain returned every day at the same hour, which was two o'clock, these cases with many others that I might mention are only to show that pain often occurs periodically & that the bark might be useful in such cases—

As Dysenteries often arise from the same cause as Inter-
 & remittants it is proper to say something of them in this place
 & it is natural to conclude that they might be used with
 advantage - The Dysenteries which occur in armies
 situated in moist places often intermit as regularly
 as the common agues, in these cases the bark may
 always successfully employed. but in the exhibition
 of bark in Dysentery, we must always pay particular
 attention to the humors & shirs. In Chronic Diarrhoea
 the bark is very generally prescribed & often with advan-
 tage, but this not a new practice. Cholera morbus
 sometimes returns periodically in which case the
 bark is the proper remedy - The Cholera Infantum
 in this disease nothing is so good as the bark, I believe
 that there is no Febrile disease of three days standing
 which does not either remit or intermit - The bark
 is often used with advantage in dropsy especially
 when it succeeds an Intermittent fever, in some
 cases of Hydrocephalus Intermittent an intermission is
 often perceptible & in these cases the bark may be
 employed with great advantage, when Dry Dropsy
 occurs as a Symptom of Typhus, the bark is one
 of the best medicines - Jaundice is often produ-
 ced by torpor of the Alimentary canal, in these
 cases the bark is often used with advantage -
 In Whittier's Pul. the bark is used indiscriminately
 in all cases & I can assure from much experience that
 it never fail to do harm, but I must acknowledge
 that there are cases of Consumption succeeding an
 Intermittent, attended with great debility & an expecto-
 ration of matter resembling pus, which has a rema-
 rable sweet taste, to which the bark is peculiarly
 adapted, this disease is more accurately described

By professor Murray than any other author with whom I am acquainted, & to his work I refer you for a more accurate information.

Dr. Cullen says that 9 of 10 cases of Consumption bark does harm.

December 24th - - -

The bark has been recommended in hemorrhages of all kinds, but I don't hesitate to declare, that from the experience I have had, in the management of hemorrhages, its indiscriminate use, in these cases may be, & is very generally attended with serious consequences. The greater proportion of hemorrhages that I have seen, have been of the active kind & consequently the use of the bark was never indicated. The hemorrhages occurring in continued fevers is always of the active kind, & here the bark is always a dangerous remedy. In the latter stage of Typhus fever hemorrhages sometimes occur, as a symptom of great debility, in those nothing is more efficacious than good bark. I think Dr. Cullen has very injudiciously placed menorrhagia among the hemorrhages of the passive kind, I have scarcely ever seen it as such, & from repeated experience I conclude that the bark is very seldom if ever indicated in this disease. In recent Hemoptoeis the bark very generally does mischief, but when it occurs as a symptom of universal weakness in the latter part of Phthisis, it may be a very useful remedy. In cases of Mictus Cruentus occurring in old people or persons whose constitution are worn out by long & repeated attacks of Gout, the bark is one of our best remedies, but when this residing of blood in febrile diseases it calls for remedies of opposite nature.

Upon the whole I do not think that the bark will ever be entitled to much notice in the management of hemorrhages - Scurvy from experience I can say very little of this disease. We are told by many respectable authors that scurvy is often complicated with intermittent fevers, & in these cases the bark has been found useful but as the disease does not often happen except at sea I believe it to be principally inflammatory. Dr. Lind in his great work on scurvy does not recommend the bark. The scurvy sometimes occurs in the neighbourhood of marshes, we find the bark a very good remedy in such cases - In Exanthematic diseases the bark has always been found a favorite remedy, particularly in eruptive small pox - According to Dr. Cullen there is but one case of this disease where the bark is advisable that is when the symptoms of putrescency occur in the confluent kind - But there is another case in which the bark is not less indicated; at the time the eruption should appear when symptoms of great weakness & want of energy are observable, & the pox instead of forming in the usual manner, appear only in the form of small red streaks, the bark given at this time is one of the most important medicines that we are acquainted with - I do not consider that the bark is ever indicated in Measles, because the disease is seldom if ever putrid, & I think no such thing as putrid measles ever occurred; & they are most always of an inflammatory nature, & the described by Sir John Watson in the name of the putrid measles, appears now very evident to have been the Scarlatina angiosa as has been proven by Dr. Williams -

In some cases of Scarletina it is very difficult to distinguish it from Measles, as I have myself experienced in this city, the hæmorrhage which is left after the Measles often require more attention than the primary disease, it is often successfully treated by bleeding & purging &c. But I can assure from much experience that bark Col. alkali are much more important remedies. Dr. Withering says that he never knew the bark necessary in Scarletina Simp. the Chicken pox very seldom requires the aid of a Physician & of course bark is seldom prescribed. Erysipelas it is astonishing to see the variety of treatment in this disease. In Scotland it is always as an inflammatory disease, by bleeding purging &c. But in London the disease is treated as putrid by bark wine & many other tonics, these two opposite practices, we are told are very success & it can be explained on no other principle than the effect of climate. Peripneumonia, or Vesicular fever, this is a very rare disease in our country, but I have seen three cases of it in this city all females, they all require the lancet in the first instance, but afterwards the bark was found necessary.

Scrophula & Rickets are less related to each other than has commonly been supposed & indeed the symptoms & effects of the diseases are very opposite. The Scrophula is a very common disease among the Indians, but they are more affected with Rickets. The bark is a most invaluable medicine in Scrophula particularly in the open sores usually attended this disease but in Rickets it is seldom of any service. The bark has been recommended in Cancer, but I believe

It has seldom been of any use; In Gangrene the bark has been one of the most important remedies Gangrene has been very properly divided into two kinds 1st Gangrene from deficiency of action & 2^d from increased action or inflammation. In the first of these the bark is one of our best remedies, but in the second it is always injurious for altho' we may appear to increase the strength of our Patients, yet when there is much inflammation the bark never fails to do mischief, as Spasmodic diseases often on deficiency of action, the bark in these might be supposed to be useful. Epilepsy is one of these diseases, but the bark in this complaint is seldom of service. Epilepsy is one of the oldest diseases with which we are acquainted, it is even mentioned in the Bible, & it is probable that the disease was as well acquainted by the oldest Physicians as it is at present. This Disease often depends on a Mobility of the nervous System, & in these cases we may despair of a perfect recovery: but it may depend on other causes, as a plethoric state of the System, or it may arise from certain adorns & in these cases I have no doubt but that the disease may be cured.

Tetanus. I do not deny that the bark has ever been of service in this disease, but at the same time, I must observe that whenever it has done good, that wine has been taken with it in large quantities, when this disease is brought on by Sereno, Sereno dropic Stamoni or Camphor, it is much more curable than Tetanus arising from wounds - Chorea St. Viti may arise from various causes

It is said that worms often give rise to this disease, but I believe this is seldom the case unless when there is a peculiar morbidity of the System. Dr. Whirlehoff says that he has often succeeded in curing it with bark & other tonics; that this practice will often protract the paroxysms of this disease, I have no doubt. Dr. —

formerly a student of this university was often attacked with this disease during the lectures so as to disable him from attending to his professors. Dr. Keene advised him to use the bark he did so, & by that means enable to protract the paroxysm for several hours, I believe he is still living.

The bark has been highly recommended in Pertussis, & it is certainly a valuable remedy, but we must be careful not to give it in the first stage of the disease. Dr. Sydenham says when the disease is recent it is improper, but when it has continued some time & is kept up by Saliva it has done good.

When asthma arises from a morbidity of the System, the bark promises to be a good remedy but when the paroxysms are attended with a turgescence of blood in the lungs or brain &c. the bark is highly injurious. Sir John Flaxer has seen the Hysteric disease to return periodically in which case the bark is an important remedy.

Angina Pectoris. I have seen but very few cases of this disease; when it arises from or is connected with an arthritic affection the bark is a valuable remedy. In Melancholia & Mania the bark in combination with opium & aromatics is often prescribed with great efficacy, instances of which I have more than once met with in our Hospital, but in these diseases the bark must be given with caution.

I shall detain you but a very little longer with the bark. I have hitherto spoken only of its internal use. I shall now say something of its use externally. The bark has been recommended as an anthelmentic in the form of a poultice to the abdomen. If the bark is ever useful in cases of worms. I cannot adapt the opinion of Mr. Moore that it is anthel. that we are acquainted with, I have used the bark in obstinate Inter. quilted in the form of a jacket & worn next to the skin. Dr. Rossiter recommends the bark jacket to be made up with wine Dr. Dureau recommends bark to be stirred in the diet. I have generally applied the bark jacket on Infants who could not be made take the bark internally. The bark when used externally should always be powdered fine as possible, for in this manner it operates sooner. The operation of the bark when externally applied, must be exclusively on the solids, & I do not consider that any part is ever absorbed. I have always observed that when ever the bark was applied externally for the cure of Inter. that it was always necessary to remove the quilted jacket at the time of the accession of the paroxysm, & when this was not attended to, the hot stage was always increased. Dr. Alexander says that he has cured Intermittants by immersing the feet & legs in a decoction of bark. The legs should be well rubbed before they are put into the decoction. This is done when the Stomach is too weak to retain it. The bark exhibited in the form of an enema combined with laudanum is often a good remedy in the low state of Typhus fever, when the Stomach would not bear it. Dr. Jackson found the bark worn around the waist increase the force & frequency of the pulse 3 or 4 pulsations.

With respect to the Pharmaceutical preparations of bark I shall say but little. The decoction of the bark is very often prescribed, but I do not think it equally efficacious as the infusion prepared with hot water, & this latter is certainly the most agreeable medicine. The cold infusion is often preferred to either of the above, as being less apt to disagree with the Stomach. The tincture of bark I shall not recommend for altho it may sometimes be useful, yet the mischief arising from the use of medicine in Spirituous menstrua often counterbalance all the previous good effects. And upon the whole, I am acquainted with no menstruum that dissolves so much the qualities of the bark as the gastric juice it self.

Sapentaria in combination with bark is very important & renders the bark more efficacious than when alone, it has been highly recommended by Sydenham. Sir John Pringle, & many others in the treatment of Intermittant; this combination will not answer in Inter. Rheumatism & pleuritis. Bark has been given to great advantage combined with Valerian in cases of Mania Epilepsy & Melancholia, this practice is highly recommended by Dr. Mc Bride Camphor is often used with bark. In Typhus fevers, powdered mustard has been used with bark with great advantage in the proportion of 8 grs. of the latter to half a dram of the former in very obstinate Intermittants. He says that this prescription is particularly adapted to the latter stage of Typhus. I think a much more important combination exists in the union of 8 or 10 grs. of red or black pepper instead of mustard this latter is said to be

Very well suited to those cases of typhus where the bark has been found useful.

The combination of Opium with bark is an important one in the treatment of many diseases, particularly in Typhus fever, Opium is also sometimes used to prevent the bark from purging, Hemlock in combination with bark has often been employed in the treatment of cancer but of this I have no experience.

The Volatili Alkali is sometimes an important addition to bark in Typhus fever. The powers of the bark is said to be greatly augmented by the Mineral Tonics as Iron Copper &c. - The rust of Iron with bark has always been a favourite remedy of mine in Dyspepsia & Gleets. Blue vitriol is often added to bark in the treatment of Inter. in certain Inter. fevers I shall say hereafter that arsenic is often necessary to be combined with bark. When glandular swelling appear during fevers, Calomel with bark is an invaluable remedy. Cream of tartar with bark has of late been highly recommended in Inter. fevers. It has been said to increase the powers of the bark, but in what it does it I am unable to determine. I have no doubt but that this would be a valuable prescription particularly when it was doubtful about the propriety of giving the bark on account of its stimulating qualities. This preparation is said to be particularly adapted to Dyspepsia succeeding Inter. fevers. I have given the bark with carbonate of magnesia in cases of Dyspepsia & often with evident advantage, this combination will

Succeed where the Magnesia would not have the least effect, it is likewise of great service in many cases of Gyrosis - Scrophulous swellings will sometimes yield to the bark in union with the Mineral alkalies, when no other form of this medicine will have the least effect. Some cases of Inter. will yield to mercury when bark & every other medicine has failed, but I dislike the practice of many Physicians, who always prefer Mercury to bark in the cure of Inter. & I even hold it cruel to resort to a Salivation before attempting the cure by bark, & moreover I believe that 95 cases out of 100 may be safely cured by bark, whereas not 1/10 part of that number was ever cured by Mercury. Arsenic is sometimes preferable to bark in the treatment of putrid fevers, but I can safely affirm that it seldom if ever does any good in the latter stage of Typhus. Next to the article bark I wish you to set down the Cornus Florida or the Cornus Serotina or the two species of dogwood bark & the different species of Salix. Dr. B. did not proceed to treat of these articles on account of some disarrangement of his notes. The Eupatorium perfoliatum comes next in order, I shall say but little of this at present, but speak more fully of it hereafter. Eupatorium is a powerful astringent in combination with a bitter, when taken internally it appears to have a powerful effect on the skin, & is said to be peculiarly adapted to some herpetic affection. The garnes river ring worm it sometimes effects the Scrotum penis & sometimes

Extends into the annals, this disease very frequently appears in Virginia North & South Carolina & in the State of the Ohio is effectually cured by the Eupatorium.

I shall now proceed to treat of the other latter remies, which along with the other latter qualities possesses a great deal of aromatic properties, & are very nearly allied to the class incitantia or Stimulents and first of the - Aristolochia longa, this plant is a native of the South of Europe, the root is the part which is more generally used, it is said that it possesses the properties of an emenagogue in a high degree, but of this I have no experience - Dr. Cullen says that the root is a valuable remedy in retention but not in Suppression of the menstrues. The aristolochia is an ingredient in the celebrated portland powder - The following is the formula take of equal parts of the root of the Aristolochia longa of gentian Chamædis & Chamæphitris & of Centaury one dram of this powder is recommended to be taken in wine broth or tea - every morning fasting, for three months then diminish the dose to one $\frac{1}{2}$ for 6 months then $\frac{1}{2}$ dram every other day - The portland powder has not done all the mischief that has been ascribed to it & I shall hereafter endeavour to point out the cases of Gout, where it is useful, Portland powder is said to have induced Hydrothorax apoplexy & palsy, but I am inclined to believe that these terminations of Gout were the natural termination of the disease, & that it would have ended thus had not the powder been taken -

Aristolochia Serpentaria. The common Virginia snake root only found in America, there are

Several kinds or species of snake root which has occasioned a great confusion in the names, the Virginia Snake root may be distinguished by the root consisting of a number of small fibers issuing from one head & being of a light brown colour - having a slight aromatic smell & a pungent bitter taste - The root of the other species of snake roots are large & woody, particularly the Pallygala Sinica, whose taste is more pungent but not so bitter as the Virginia snake root -

Spigelia Marilandica or Carolina pink root is often called snake root, but the properties of this last is very different & we shall treat of them particularly hereafter -

The Serpentaria Virg. is considerably tonic but as it raises the pulse a good deal it is certainly a powerful stimulant. This species of snake root is very suited to every fever that shews a disposition to Typhus, & in all cases where the bark & wine are found necessary, the snake root will be found peculiarly adapted -

December 28th

Serpentaria Virg. is much more stimulating than any species of Cinchona I am acquainted with & hence its use is not admissible in the inflammatory state of fevers. There is a disease often appearing in the South & Middle states under the name of putrid pleurisy it comes on with usual symptoms of Pleurisy or Pneumony & there is often an effusion of the skin resembling carbuncles, the pulse is often full strong & bounding & would seem to require the lancet but in general the loss of the smallest quantity of

Blood is productive of the greatest delicacy. In these complaints I am acquainted with nothing so valuable as Serpentaria Carton Cascarilla. This bark is found in small quills in Gargia, has slightly aromatic smell & a warm bitter taste, this bark has been recommended in Dysentery & Diarrhea, in the dose of one scruple or half a dram. The Cascarilla has been used by Willoughby & Bergius as a substitute for the bark in the cure of Intermittents, but of this I have no experience, it is similar to our snake root in its medicinal properties, & not generally proper in Intermittent fevers. It has been found of very great use in the striking fevers, I have been informed by some Physicians near Frederic Town Maryland it succeeded in curing Typhus Inter. when the bark failed. It is particularly useful in what has been called putrid fevers.

Arnica Montana. This is considerably astringent & aromatic & has been said to be a good substitute for the Peruvian bark, but I believe it falls very short of deserving all the praise that has been ascribed to it. It is said to be an excellent remedy in the decline of Dysentery, I have not so much as ever seen the article.

Guaiacum officinale. This is considerably bitter & aromatic & appears very nearly allied to the Serpentaria. It is said to be very efficacious in certain affections of the skin resembling leprosy.

Lupulus communis. This is certainly not a simple pure bitter, we have before noticed it is very astringent, the hops is said to be a good lithontriptic but the accounts that we have received of its use in Calculus & Nephritic affections are very opposite & even contradictory. Dr. B. says that since the

Introduction of Hops into into Mault liquors, the gravel has been less frequent in London, but Dr. Darwin says that mault liquors appears to favour the generation of calculi. From my own experience I am inclined to favour the supposition of Dr. Darwin, for I have often been seized with nephretic pains after drinking porter & other mault liquors. It is a very rare disease in Prussia, but formerly it was very common, it occurs among those who abstain from coffee & tea & drink mault liquors.

Rheumatism is now a very rare disease, but formerly it was very common in Prussia.

In Chlora's I have recommended to give strong porter, & found it an excellent remedy, it is certainly more grateful than wine or spirits & sits much easier on the Stomach. It seems very well suited to the low state of fever.

Besides these virtues the Hops is certainly a good narcotic, every narcotic is stimulant. The celebrated Seneca speaks of its narcotic power, it increases the force & frequency of the pulse.

The Hop pillow will often induce sleep when all other remedies have failed. The following tincture of the Hop is the one I most commonly employ. Take of the female flowers four ounces of rectified spirits & ounces, infuse for 6 or 8 days frequently agitating the liquor, it must be kept in a temperature of 80 or 100 degrees of Fth. & at the period above mentioned it may either be decanted or filtered, 60 or 70 drops of this tinct. is equal to 20 drops of Laud. It is less apt to produce sickness at stomach & head ache than opium & in a great many cases it will answer very well.

December 31st

We shall now commence the consideration of the
 = metallic & mineral tonics & first of Iron. I shall pass
 over the natural history of this article, because it more
 properly belongs to another department, Iron is prescribed
 in various forms, but it is scarcely necessary to
 enumerate them particularly as you find ample details
 of them in Chemical books. It may not be a miss
 to mention the preparation of the carbonate of Iron
 which is both the most common & most important
 form of this medicine. Take of Super Sulphate of Iron
 3 iii Sub. Carb. Soda 3 lb, by Desolv. in as much Water
 as may be necessary and mix them well. Let the Carbon
 Iron which is precipitated be washed with warm
 Water and afterwards dried.

Ferrous Tartarizatum is also a valuable medicine
 in some cases, it is thus prepared take of filings of
 iron one pound, Cream of tartar two pounds
 distilled water one pound, mix them & expose it to
 the air in an open glass vessel 18 days, then rub
 the matter dried by a sand bath into a very fine
 powder. By exposing it to the air & moisture the Iron is
 oxydated, & its oxyde combines with the excess of acid
 of acid in the cream of tartar, a triple salt resulting
 composed of Potash oxyde of iron & tartaric acid
 Its dose of from five to fifteen grains. The marshal
flavour is another good preparation of Iron, it is thus
 prepared, take of the red oxyde of iron, washed & again
 dried, & muriate of Ammoniac equal parts, mix
 them well together & sublimate, the dose of this is from
 6-10 or 15 grs. to a scruple. It is thought that the addition
 of Ammonia to Iron increases its tonic power, & it is

certainly considerably diuretic Sudorific & tonic
 The Vinum Ferratum is sometimes the most
 useful of all the preparations, it may be prepared
 thus Take of iron filings one ounce Rhensis or
 Spanish white wine one pint, mix & let them
 remain nearly a month & then filter This medicine
 sets very easy on the stomach, & notwithstanding
 the great aversion of the London Pharmacopoeia to
 wine & other spirituous medicines, yet they candidly
 acknowledge that the virtues of iron exists ~~freely~~
 in this latter preparation - Dr. Cullen's ideas of the
 operation of iron in the stomach are very
 erroneous, he supposes that iron is the only is only
 active in combination with oxygen or an acid
 but Spallanzani, has long since proved this
 to be an error, the gastric juice in a healthy
 person is neither acid nor alkaline & yet it
 readily dissolves iron - The operation of all metals
 is in many respects very similar, they are all
 more or less tonic & some considerably stimulant
 The operation of iron is in general very slow
 but it never fails to increase the fulness &
 frequency of the pulse, hence its use in hemorrhages
 of the active kind is indispensable - The followers of
 Dr. Stoll were averse to the use of bark & other
 Vegetable tonics in the treatment of fevers -
 The theory by which they were governed prevented
 them from giving any medicine which would
 put a stop to the disease too soon because they
 considered that in any fever a morbid matter was

Necessary to be ~~avoided~~ ^{enough} ~~enough~~ before the disease could be cured safely, hence they frequently resorted to the use of iron in Intermittants, because its operation was slow & gave them time to evacuate the offending matter. Iron is certainly prejudicial in all fevers of the inflammatory kind whether remittant or continued but the Vegetable tonics are of great use in flaccidity of the System. I have often had occasion to use the preparation of iron in Leucorrhoea & always with decided advantage, but in this disease febrile symptoms often occur in which case it would be necessary to restrict the use of this medicine. Gleets when long continued very generally are kept up by a general debility & flaccidity of the whole system. In these cases the exhibition of Iron with Calumbæ or Gentian is one of the most efficacious medicines with which I am acquainted much better than Balsam Capivi &c. Retention of the menses often depend on a general debility or a weakness in the uterine vessels, in which case the Carbonate of iron with a few drops of the oil of Sassafras, is an excellent remedy, & indeed the preparation of iron may be given with advantage whenever the tonic plan is thought advisable. Beef Mutton Porter exercise &c are all found proper. Of the use of Iron in the management of hemorrhages I can say but little. It is a practice of ancient date & from my own experience I can add but little to its reputation. The use of iron in Menorrhagia has been very much practised, but I think that the astringent quality of iron is inconsiderable - And that its Stimulating

Powers would always justify its use in hemorrhages of the active kind. The Hematuria of old People as I have said before often depends upon a relaxation of the vessels of the kidneys & in these cases I have no doubt but that iron & other metallic tonics might be serviceable after bleeding &c. In the latter stage of Phthisis we often resort to the use of iron & certainly with evident advantage, especially in those cases so accurately described by Mr. Murray. And in the Consumption which Sydenham recommended tonics -

The Piles sometimes is the effect of great laxity in the vessels near the anus, & in those cases we may prescribe iron with safety, but this disease may generally depend on an increased action of the vessels of the parts, in which case iron is certainly injurious. Iron is peculiarly adapted to those cases of Piles occurring in old People & of a sedentary life. A case of the Piles which lately came under my care resisted every remedy that was given until I had recourse to Iron with (Chew Barks. &c.) However the tonic-plan is thought proper in dyspepsia

the use of the Carbonate of Iron in Union with Columbo a gentian is certainly an efficacious means of treatment. In Pyrosis some of the preparations of iron are often the best medicines. In diabetes the phosphate of Iron has been used by Dr. With great advantage, and think it preferable to any of the other preparations, he attributes a great deal of its virtues to the phosphate of ~~Iron~~ and he even supposes we ought to give the phosphate of Soda in preference to all other purgatives in this Disease. - - -

(63)
* In the forming state of Dropsy there is great action in the Blood vessels, and Iron is not proper in this stage of the disease. The Carbonate of Iron in Combination with Rheubarb has been used in Paris by a Gentleman who now tells me - Iron will be found a most important remedy in Chronic affections of the Spleen occurring in Marshy Counties and Drunkards.

Iron has occasioned dangerous Symptoms at the Lungs. The preparations of Iron always prove injurious in Gout.

Dr. Brew used the oxide of Iron in Asthma during the intervals and has cured many with it, he supposes the oxygen is separated from the iron.

Dr. Physic and some other Surgeons in the Country have used Iron in Cancers, but without having done much good. Cancers have been supposed to be an organized body. Iron is well suited to many cases of Ulcers, especially to old flabby ulcers in which the bark has been used with such advantage.

In dropsy the use of Iron has been very common and in many cases I have no doubt it has been serviceable but in the management of Dropsy, the use of Iron and indeed all other tonics ought to be resorted to with great Caution.*

In Chronic obstructions of the Liver and Spleen I have no doubt but that the Iron will be of much service. In Regular Gout the use of Iron is not of much consequence but in Atonic Gout which is so constant - by attended with great ability Iron is a valuable Remedy and I think we may safely continue to give it in any of these cases where the vegetable tonics have been found useful.*

The Carbonate of Iron has been used with great advantage in the intervals between the

Paroxysms of asthma and Dr. Pree who has written a good work on this subject almost considers it as a specific in Cancers, The use of Iron in Late has become common. It is said from very respectable testimony that Iron in the form of a fine Powder sprinkled over the open Cancerous sores, has been of great service and I have no doubt that Iron is often well suited to ulcers moili mois which resembles Cancers, and a case of cutaneous eruption resembling the Scarpa, I had recourse to the use of iron with great advantage - age, but it did not ~~radically~~ ^{radically} cure my Patients.

January 1st 1811

What I shall say further on the use of Iron will be principally of a speculative nature. Most Physicians believe that Iron acts on the parts to which it is immediately applied, or in other words on the solids. But many others suppose that it is absorbed & taken into the circulation. Dr. says that a Patient of his who took 1150 grs. of iron discharged urine of a black colour - I suspect there has been some fallacy in this assertion, because subsequent experiments on the urine has not discovered the least particle of iron by the chemical tests. A Patient in the Peninsular Hospital during the time that I attended, took 480 grs. of iron in 24 hours & the Pupils who afterwards made experiments on the urine with the infusion of Gall did not discover the least particle of iron. Dr. Eust. Wright made several experiments on dogs

And other Animals in order to discover whether Iron ever entered the lacteals, & the result was, that he could always readily detect iron in the fluids of the intestines but that none ever entered the absorbent vessels—
 Dr. Hodg & Dr. Wearnby two ingenious Graduates of this University instituted various experiments on dogs in order to determine this point more fully, I shall not mention the experiments, but merely the result

because the Inaugural dissertations may be easily obtained, & I can assure you they will be read with much satisfaction— Dr. Lodge found that

Iron could be readily detected in the lacteals as far as the Conglobate glands of the mesentary. Many experiments were made on the Chyle in the Thoracic ducts; but no Iron was found from the experiments, we are to conclude that the mesenteric Glands act an important part in the system and that the changes which the fluid suffers in passing through these glands are very considerable. I must acknowledge these experiments have very much shaken my opinion with respect to the operation of Iron, but still I am inclined to believe that as they were made in the inferior Animals that they were owing to some fallacy.

because, we know that the assimilating powers of the Human system are far superior to those of those animals. I have made several experiments on the branches of trees Mulberry & willow placed in a strong solution of the Sulphate of Iron, and in all of which I could discover traces of the absorption of the metal very distinctly in every part the branches and leaves, and I found that some plants lived much longer and greener much better in the solution of the

Sulphate of Iron than in pure water, I do not consider that the presence of Iron in the Blood is any Proof of its being absorbed by lacteals, because we find.....

Iron I suppose a Compound, and that the elements of it are taken into the system and known ^{iron} formed ^{out} of it. as the bile is formed out of the blood, Davy's discoveries of the Composition of those alkalis renders the Composition of Iron more than possible. probable - I therefore conclude that iron is a compound body & capable of being formed by the living powers of the system. We find also lime & iron in many Vegetables, that have been raised actually from the seed & the pure water, this certainly proves that there is a power in the Vegetable System which renders them capable of forming these substances, & why may not the human body have a power of forming articles which do not exist ready formed in the chyle - Morgagnie says that the blood of Patients taking martial medicines runs of a more brilliant red colour, than at any other time but this does not disprove what I have asserted because the exhibition of bark or any other tonic would have the same effect, & it can be explained in no other manner, than by supposing that those medicines act by their tonic power giving energy to the system, & thus enabling it to perform its functions with greater force - I shall now say a little more on the doses of iron & then dismiss the Subject - Dr. Cullen very justly observes that the good effects of iron are often mislead by exhibiting

It in too small quantities, the Dr. commences by giving 4 grs. of the rust of Iron & gradually increasing it to 1 dram in the 24 hours - I have seldom if ever seen any inconvenience from too large doses, when it has been given in a gradual manner - I have given as high as 4 drams, & in one case an ounce in the 24 hours without any inconvenience to the Patient. Dr. Cullen with most of the British Physicians are very much attached to the rust of iron & they seldom give it in any other form. But the Italians always prefer the filings of iron. I believe that either of these preparations may be used with evident advantage, but I prefer the rust to any other, & I find it very convenient to give it united with ammonia or some aromatic - This will make the medicine palatable & prevent the laxative effects of the metal which some times happens -

Copper Dr. Cullen strongly places this in his class of astringents. There is no doubt but that it is a very stimulating tonic, I infer this from its curing diseases depending on a loss of tone & attended with every symptom of Debility. Dr. Lewis asserts that this article is insoluble in the gastric juice Dr. Duncan likewise agrees with Lewis, but these Physicians are very much mistaken, for many facts have united to prove that Copper evidently suffers a diminution of its weight in the stomach. Dr. Stark relates the case of a child who swallowed a copper piece of money, which was discharged four days after per anum, with all the figures

of the money raised, there are many other such cases related in the Philosophical transactions, but I must acknowledge that the copper dissolves very slow in the gastric juice. Dr. attended a little girl of this City who swallowed a cent, which ^{was} ~~was~~ retained seven days ~~on~~ on the third day after it was swallowed a copious Salivation took place & discharged 1 lb. of fluid a day. The Salivation in this instance was occasioned by mechanical irritation & it did not recover untill the cent. was discharged, it was afterwards examined & no perceptible diminution of weight was perceived. This is not a rare case, copper very frequently Salivates but we must not suppose from this that it is ever absorbed. Copper often produces the most violent & distressing symptoms, such as nausea & pain of the Stomach, Cardialgia, fainting loss of appetite exanthematous eruptions, paleness of the face, loss of sensation & Apoplexy. It sometimes induces costiveness, but more frequently purging & sometimes bloody stools. You must not look for all these symptoms in any one case, but they all occur in different persons. People who live near & work in copper mines are as healthy & live to as great an age as any others, provided they take care to shake of copper dust, & wash themselves after being exposed to it & wash their clothes once a week. Unless this is done we are told that great nausea & oppression is the consequence. Copper has the same injurious effects on some of the inferior animals as dogs, but birds but seldom if ever

suffer from it, & we are told that domestic fowls drink up the green water out of Copper vessels greedily, & without any inconvience, & even prefer it to fresh water —

I have shown you that Copper is soluble in the gastric juice, contrary to the opinion of Dr Duncan & other Physicians. Copper is very rarely used in its pure state, but I have no doubt, but that the filings of this metal would be acted on by the gastric juice, equally as well as the filings of Iron. Viridigrise is a preparation of copper that has been recommended in many local diseases. It may be prepared thus, place in a large vessel alternate layers of thin Copper plates & grapes, in a few days an acetic acid will be found, which will corrode the Copper, & may be taken off as soon as it corrodes the Copper. Viridigrise is an astringent & has been highly recommended as an external application to Malignant Ulcers of a Venereal origin. It has been used in the form of pills by a Physician in France a weak solution of Viridigrise has been found useful in Gleet. Mr. recommends the following preparation take of Viridigrise & green oil viz of let it be used three or four times a day, he says this injection has cured many cases of Gon. where all the usual remedies have failed I have very little experience of the effects of Copper in the Gonorrhoea, but I believe that it can be seldom used of the strength that has been recommended, & indeed I never could use the injection of lead as strong as recommended by Hunter & B Bell without serious inconvience to my Patient —

Blue Vitriol - This is a super Sulphate of Copper. This may be proven by many tests, the following is sufficient, all the blue vegetable colours are made red by a solution of this salt - Which evidently proves its acid properties. The blue vitriol has often been used with the best effects in remittent fevers Dr. Adair says that he gave it alternately with Emetics every other day in several cases of Intermitants that came under his notice, in some of them no benefit was derived from it, but in others a very perceptible change for the better was observed. In many cases the following pill was found very efficacious, from 6 to 8 grs. of blue vitriol with one ounce of Canela alba & was made into 80 pills, with simple surrip one or two of these was advised to be taken three or four times a day & gradually increased to as much as the Stomach will bear. It is a mistake to suppose, that by the long continuance of this medicine, that it accumulates in the System & that dreadful effects will at length ensue. In a future lecture I shall speak of the use of this medicine in Pthisis. In the year 1808 I prescribed this medicine in several cases of Inter. in the Pennsylvania Hospital I generally combined it with some other tonic & it cured when bark & arsenic failed, I generally combine ginger with it or the extract of bark it ought to excite a little nausea the dose is ant⁶ or one $\frac{1}{2}$ of a gr. - As it has succeeded so well at Antigue, I would recommend it more particularly in warm climates. Dr. Mead recommends

Blue Vitriol in Hemoptesis as one of the best remedies he has ever used, his directions are the following "ten grs" of the blue vitriol are to be dissolved in two pints of water, a table spoon full to be taken three or four times a day—

Cuprum ammoniacum, This is prepared in the following manner, take of pure Sulphate of Copper two parts, Carbonate of Ammonia three parts, rub them well in a glass mortar untill all the effervescence is over, then it is to be rapped in bibulous paper, & dried on a chalk stone first & afterwards with a gentle heat it is to be kept in a glass vial well stopped— as this preparation is so easily made, it is better to prepare a small quantity at a time, because it is liable to spoil—

The aqua Saphira is made by dissolving one dram of the Cuprum Ammoniacum in a pint of water, this latter is said to be very useful as a Collyrium in ophthalmia & remove specks from the cornea— The cuprum ammoniacum has long been used as a favorite remedy in Epilepsy but I think that ^{its} virtues have been greatly exaggerated Dr Cullen has seen many cases of Epilepsy greatly relieved by this medicine & some entirely cured; he generally commenced by giving half a grs. two or three times a day, & gradually increasing it to 5 grs. but from my own experience I think the Stomach will seldom retain this quantity, & it should never be taken on an empty Stomach— The Cuprum ammoniacum has been known

To produce Salivation as well as the Copper in Substance, but it does not often happen it occurred in one case in the Penn. Hospital. The good effects of this medicine in Dropsy has long been observed, it probably acts both by its tonic & diuretic properties. In open Scrophulous sores I have employed an ointment made of Viridigree & common Basilicon with the happiest effects. In old Venereal sores, this application is often curative, this oint. is likewise very effectual in removing or curing the sores which sometimes succeed the use of mercury, which I call the mercurial ulcer.

The Tenia Capitis has likewise been cured by this ointment when the usual remedies fail. The inflammation of the eyes is successfully treated with this medicine, it appears to act by its astringent & stimulating powers.

Silver. The only preparation of this metal now employed is the argentine Nitratum or lunar caustic, it has long been employed as an escharotic, its application to Venereal sores often dispose them to heal. The manner in which I have been accustomed to apply it is very different from the common practice, when using the caustic I apply it with a camels hair brush, & immediately it gives pain, which would be very caustic is in this case very much mitigated by washing it off with warm water, & in this case the Patient will submit to the operation much oftener. In indolent ulcers the use of lunar caustic has been highly recommended by Mr. Fome, whose experience

on this subject has been very considerable, he says there are three cases of Indolent ulcers, to which the caustic is peculiarly adapted. These are, 1. Lepra scro, which often attack impregiated seamen, the 2 is an obstinate ulcer the consequence of lues after the venereal action has subsided, I have seen this latter case my self & found the bark & hemlock when taken internally were often good additional remedies, the third & last is a species of ringworm which is very common in warm climates, but I think that the Argentum bitrinum will often have a better effect.

January 4th -

I have hitherto spoken of the external use of the Argentum Nitratum only, I shall now say few words respecting its use internally. It is said to be one of the most powerful antiseptics we are acquainted ^{with}, it is said that meat impregnated with a solution of the Argentum Nitratum, will be preserved sweet for many years, although exposed to heat & every other cause which favours putrefaction, hence it has been proposed to use this medicine for the preservation of dead bodies.

The Luvacetic has of late years been highly recommended as a remedy in Epilepsy - Dr Sims has related several cases of the good effects of this medicine, but in many cases he tells us it was of no benefit, the Dr remarks that even in those cases where it was found useful, that it very commonly aggravated the disease at first, but that

Its good effects were soon evident, Dr. Wilson has gained his testimony with that of Dr. Lewis in favour of this medicine, he says that he has given it to the extent of 2 grs. & a half three times a day, but he found it necessary to give very small doses at first. Dr. Ralph says that he has said that he has seldom cured his Patients readily by the use of it, but he always prolonged the Paroxysms. It very often kept the bowels open, but no other local effect of this medicine has been noticed, at the, it has been given to a considerable extent. The lunar caustic has not been much used as an ~~ant.~~ internal medicine in the United States, but there are one or two cases recorded by Dr. Sardin in the medical repository of New York, where this medicine was used with the best effects, & in the Supplement to the Medical & Physical Journal, there is another case in which the caustic was used very successfully. I have employed this myself in 3 or 4 cases of Epilepsy, which occurred in P. Hospital, in some it was evidently very useful, & in all of them the System was very much invigorated. Yet I cannot conclude, that in these cases the medicine had a fair trial, because they were of long standing & the powers of the mind were very much impaired. The Lunar caustic may be given to great extent without any inconvenience to the Patient, but it is necessary to commence at first by very small doses, I commonly exhibit $\frac{1}{8}$ of a gr. in combination with opium or simple syrup.

Two or three times a day & Gradually increasing it to 2 grs. or more in the 24 hours. Upon the whole we are to conclude from the many cases of cures recorded by respectable authority that the Lumen Cæcæ is deserving of great attention in the management of Epilepsy.

The *Argentum Nitratum* has also been recommended in the terrible disease of *Angina Pectoris*.

I have not met with one case cured by this medicine, & from respectable authority we are told that it has been useful in almost every case in which it has been tried. If one could depend upon the following fact, it may be thought to be taken up by the absorbents, a copious Salivation has been produced by applying it to a sore on the arm, it is adapted to those cases of Epilepsy depending upon great instability of the System.

I shall now proceed to say a few words on *Zinc*. Bismuth & Arsenic & Sulphuric acid. The Flowers of Zinc is the preparation most commonly employed, they are prepared by exposing the metal to a red heat on an open crucible, it takes fire & burns with a white flame, flakes of a white colour are very soon discovered to issue from the crucible, these are to be collected, & they will be found on the outside of the metal it is an oxide of Zinc. The flowers of zinc were first exhibited by the celebrated Glauber in Epilepsy, but it was not until sometime after that Gaultier a German Physician brought this medicine into practice, he relates several cases of the efficacy of the flowers of zinc.

In Epilepsy, at the Dr. Cullen has told us that Gaultier did not find it of any service Mr. B. Bell relates a case of a Gentleman being cured of an Epilepsy by the flowers of zinc after the voluntary motion of the arms had been lost for some time, having laboured under the disease for 16 years - The medicine still continues to be used in the P. Hospital, & in many cases with decided advantage - In many cases of Hysteria the flowers of zinc are very well adapted - Dr. Duncan relates one or two in confirmation of this in the Edinb. Medical enquirer; Dr. Cullen appears not to have placed much reliance in the flowers of zinc in the cure of Epilepsy - Dr. A. of Geneva mentions a curious circumstance respecting the use of the flowers of zinc & Cuprum Ammoniacum A woman who had been in the habit of giving flowers of zinc & Cuprum Ammoniacum alternately she was made very sick by the exhibition of 2 grs. of the latter, but when the medicine were given in combination, she was able to take 2½ of one & 2 grs of the other without any inconvenience - The flowers of zinc has been recommended as an application to sordid ulcers, arising from Gun shot wounds, but of this I have no experience -

Sulphate of zinc is sometimes found native. There are two species of this salt, the sulphate & the super sulphate of zinc, the first crystallises in rhomboidal figures & fractures like a flint, the super sulphate is that which is usually met with

In the Sheps-It crystallises in four sided termina-
 ted by flat prisms, it effloresces in the air, & when
 exposed to a light temperature loses part of its
 acid. The Sulphate of zinc or white Vitriol
 enters into the composition of the quassia draught
 that I firmly mentioned, which has been
 much celebrated in the cure of Intermittants.

I have given the white Vitriol in combinations
 with Calomel or Gentian in cases of Hysteria
 with success, one or two grs of the Vitriol with
 6 or 8 grs of Calomel or Gentian has been used
 in Dyspepsia. It also has been recommended
 in Inter. & we are told that it has succeeded
 when bark & many other tonics have failed.

In cases of Epilepsy with Symptoms of Chorea
 which came under notice in the year 1804 I used the
 white Vitriol with complete success. In our
 Hospital, the good effects of this medicine have been
 long known, but I shall speak more fully on this,
 when I come to speak of emetics, it appears to do
 great good independant of its Emetic properties
 the Stomach appears to suffer much less from
 the action of this medicine than from any of the
 Emetics, it may be given to very young children
 without detriment according to Saunders.
 It has in my hands done much good, when it
 does not purge, but only nauseates.

I generally dissolve one scruple in four ounces
 of water, & give two or three tea spoonfulls

In the course of the day— If the appetite be not increased, it is certainly not as much impaired as by antimony & Ipecacuanha—

In Gonorrhoea the solution of white Vitriol proves one of the best injections. but in general I think it is used much too strong. I usually dissolve 5 or 6 grs. with 3 of Sac. Satur. in 8 ounces of water, which is quite strong enough. It ought to be kept warm & used in this state 10 grs. dissolved in ten or twelve ounces of water or in an infusion of oak bark forms an Excellent Collyrium in ophthalmia. In London the acetate of zinc is now preferred to the preparations of lead in Inflammation. Mr. Perry says that he has found 6 or 8 grs. of the acetate of zinc dissolved in 4 or 6 ounces of the mucilage of quince seed, to be one of the best injections in Gonorrhoea—

Bismuth. This resembles Antimony. In Geneva the magistery of bismuth is employed in spasmodic diseases with the greatest success particularly in Gastrodynia Cardialgia & Pyrosis. Dr. Clark thinks that the preparations of bismuth are as much entitled to the name of a specific in Gastrodynia, as mercury is Syphilis—

January 4th 1812

Tin. I shall say but little of this article. The principal virtues of tin, that claims our attention, are its anthelmentic properties, but of this I shall speak more fully under the head of anthelmentics. Tin acts wholly mechanically, this is evident from the fine powder being less active than the filings of this metal, It has been celebrated for its antispasmodic virtues, & has been used in Epilepsy & similar affections.

Dr. Monro says that tin succeeded in curing 5 or 6 cases of Epilepsy that came under his care, but he remarks that they all depended on worms, for when these were discharged the disease ceased. In other cases of the same disease brought on by a different cause, the medicine had no effect whatever, hence it appears that tin is adapted only to those cases depending on worms of the alimentary canal.

Arsenic. I shall speak of this article at more length than formerly, for the more experience I have of it, the more I am inclined to think favourable of it; we are probably not yet acquainted with all the good effects, this medicine is capable of producing. The regulus of arsenic is of a blackish grey colour, when heated in contact with atmospheric air, it soon becomes oxydated, & emits white fumes.

Arsenic in its pure state exerts little or no action on the human body, but when oxydated is one of the most violent poisons in nature. It is poisonous to all animals, in this respect it differs from most poisons. The preparation of arsenic most generally used is Fowler's Mineral solution. It is prepared thus, take of Pure Vegetable alkali & of the white oxide of arsenic each 64 grs., of distilled water one pint, boil them for half an hour in a Florence flask, & after it is heated as much distilled water previously filtered through brown paper. Every ounce of this fluid contains just four grs. of arsenic. Dr. Fowler directs from 2 to 4 drops to be given to a child from 2 to 5 years old, but this dose & indeed all of Fowler's are much too large to be given with safety. Twelve drops three times a day is about the median dose for an adult, according to Fowler, but I am of the opinion that 10 will be quite sufficient. I once gave a single drop to a child 3 years old labouring under an obstinate Inter. & it cured it instantly. I therefore think it advisable to begin with very small doses. To child 4 years old, I think 3 drops an ample dose. Dr. Darwin thinks the above preparation very exceptionable, he recommends a saturated solution of the white oxide of arsenic in boiling distilled water, made by boiling any quantity of arsenic in as much water as will dissolve it, for half an hour. Dr. D. supposes the strength of this last to be much more uniform than the preparation proposed.

By Dr. Fowler - my favourite manner of exhibiting arsenic, is in the form of pills, with a small portion of Opium, one sixteenth of a gr^m of arsenic to $\frac{1}{4}$ of a gr^m of Opium are the usual proportion that I have been accustomed to use - I think it is always more safe to exhibit it in this manner, than in the form of solution because the drops are always a variable dose - Opium not only prevents the arsenic from being discharged by the bowels, but assists in other respects - I have seen many cases of Intermittents cured with $1\frac{1}{2}$ gr^m of arsenic & have seldom gone beyond 3 gr^m. I am far from asserting, that arsenic never fails to cure Inter^m. on the contrary I know it often does fail, particularly in those cases in which there is a tendency to Typhus - In the autumn of last year, Inter^m. were very little disposed to yield to arsenic, but were readily cured by bark. I attributed this failure to my Patients being constantly exposed to the cause that produced their disease - Writers have not been sufficiently precise, as to the most proper time of exhibiting this medicine, in general I think it will be proper to observe the same caution with respect to its use as to the bark, that is not to give it in the hot stage or cat, but in the complete apirixia, yet some Physicians who are very much attached to the use of arsenic, give it all times without any regard to the febrile symptoms, whether this practice ought to be recommended I cannot now accurately determine -

Yet I must acknowledge, that there is much less danger in giving this medicine in the time of the paroxysm, than the ~~hark~~ - Arsenic almost always shows its good effects in a very short time, & diminishes the violence of the chills - If it does not it may be laid aside, not because it is prejudicial but because I think it will not do any good - Arsenic appears to be better adapted to recent cases than those of long standing - Dr. Fowler has shown us, that there are many cases of Inter. in which the hark & arsenic alone will not succeed, but which will yield to them in combination -

I found it to be the case in those Patients in the Hospital last autumn - Although I have placed Arsenic in the class of tonics, I am far from supposing that it cures Inter. by its true tonic power, indeed the very contrary effect are often to be perceived, I never could discover that it invigorated the system in the least, but more generally the Patient is extremely debilitated, but when the hark cures Inter. it evidently acts by its tonic power, because the Patient's strength is always increased - Arsenic on the contrary relaxes the whole system & gives rise to edematous swellings, & I have always observed it to be more effectual in proportion to the nausia & disease of the stomach - A Saylor was admitted into the Hospital last summer for an obstinate Inter. He took the arsenic pills above mentioned which soon put a complete stop to his fever. but he was so excessively weak as scarcely to be able to walk, & his appetite was very much

Impaired, add to this his face hands & feet were very much
 swollen, & he laboured under a complete adynamic dysentery
 -calis. From which has been observed I believe that arsenic
 operates in curing Inter... by creating a new disease
 & that it is very seldom a tonic medicine; Yet in some
 instances I have known it create an enormous appetite
 & induce a flush on the cheek, but these instances are
 very rare; Dr. Darwin thinks that arsenic operates
 chiefly by stimulating the Stomach to a strong action
 but this doctrine is certainly erroneous, since a few
 grs. Colicumb or iron is a much more powerful
 Stimulant, yet no person will assert that these
 last medicines have the same effect as arsenic -
 So far from Stimulating the Stomach to a strong
 action it induces torpor, & prevents the production
 of edematous swelling. Upon the whole the oxide of
 arsenic is often a safe medicine 2^{grs} it often cures
 those cases to which the bark is well suited - 3^{grs} -
 it often cures when the bark fails 4^{grs} like
 Mercury it often prepares the System for bark
 5^{grs} - It is not to be compared to bark in those
 cases which have a tendency to Typhus -
 It is better adapted to remittent fevers, & better
 than bark in those cases that require the lancet
 Arsenic has been prescribed for spotted fever
 which occurred in the New England States, but I
 believe not with much advantage, because the
 disease was one of great debility & the Physicians appeared
 to have prescribed arsenic merely with a view of its
 tonic & invigorating qualities, & to this is their ill
 success to be attributed -

January 8th 1812

I have now shown you in what kind of Inter-
 arsenic is to be used, I do not confidently assert
 that they are peculiarly adapted to those cases, but
 from my own experience I am of the opinion
 that I have delivered. It has been contested
 whether or not arsenic may the foundation for
 incurable diseases. This I think is easily determi-
 ned, we know that the edematous swelling, so
 often following after the use of arsenic,
 requires very little attention, & the disease
 ceases soon after the cause that produced it
 ceased to act. Mr Mcquire who was a better
 Chemist than Physician, during the autumn
 says that he often found the use of arsenic
 predisposed to Phthisis, I have my self often
 seen an uncommon prevalence of Phthisical
 cough during the autumn in which arsenic
 has been much employed in the cure of Inter-
 but this affection cannot be attributed to arsenic
 it must have had its origin from another cause
 because I have prescribed it in many cases of
 persons predisposed to Phthisis & even labouring
 under it, & I never observed that it increased the
 disease, but on the contrary in many cases, it actually
 cured those persons labouring under a predisposition
 that would otherwise have fallen victims to a

Consumption— Miss Nurse formerly a patient of Dr. Werns of Georgetown consulted me some year ago for an obstinate Intermittent, as I then thought she was remarkable there, and apparently wearing away very fast; she had chills that returned every morning, with a flushing of the face, & considerable fever, with a cough, pain in the breast, and evidently a hectic pulse— I requested that she would take the bark, but she refused, saying that she had taken large quantities without effect, it always disagreed with Stomach, & produced a stricture of the chest, & she mentioned that Dr. Werns had requested her never to submit to take any more— I then proposed the arsenic pills, which she took for a short time & the hectic pulse soon ceased, while the chills & other symptoms were as soon completely removed she was advised to take exercise in the open air but instead of this she returned to Georgetown where her complaint soon returned & she died— I was sent for some time ago to visit Mrs. Fox who had been attended for an Intermittent, I found her with a cough, pain in her breast, & with a pulse considerably active, she had been bled & blistered to no purpose, & had taken the bark with no little effect— I soon perceived that the chills returned every day, & afterwards a flush on the cheeks from these symptoms, & particularly from the similarity of this to a former case, I conceived it to be one of those cases, which so often terminated in Phthisis. I therefore prescribed the Fowler's solution

And the good effects were soon evident, she completely recovered under the use of this medicine, & has since borne a healthy child - A painter applied to me applied to me for a rough pain in his breast & extreme debility, in these cases the predisposition to pulmonary consumption was very evident & I was afraid, this disease had already formed, however I put him on the use of arsenic pills & he was soon able to work 4 hours in the day, & in a few days longer he was able to work 8 hours in the day, & by the continuance of the medicine he was completely cured. This case ought to be very impressive, it shows that arsenic is peculiarly adapted to some cases of Pulmonary predisposition, where bark will most generally aggravate the disease - I have employed arsenic in several cases of acute Rheumatism particularly Sciatica, since I first read these lectures to the class, I have had more experience than formerly of the good effects of arsenic in Rheumatism. In one case of Sciatica in the P. Hospital where I prescribed arsenic an Adema suddenly appeared, the pain instantly ceased - I do not say arsenic never fails in curing acute Rheumatism, on the contrary it often does when the bark succeeds. In certain cases of Rheumatism succeeding Syphilis arsenic appears to be peculiarly adapted. I say it is suited to acute Rheumatism, because in these cases where it has been found most useful, the

Sauro was often indicated, & the pains more increased by the heat of the bed cloths. A patient was admitted into the P. Hospital last summer for an acute Rheumatism, the arsenic pill was prescribed & they soon had the effect of removing his pains, but he was suddenly seized (& for the first time in his life) with an Inter" fever, for which he took the bark & it succeeded in curing his fever, but his Rheu" returned, this case shows the very intimate connection between the two diseases - I think arsenic is much less adapted to Chronic than acute Rheumatism.

The Periodical head ache, that I mentioned in a former lecture to arise from the same cause as Inter" are often cured by arsenic, but I have found the bark succeed after the bark arsenic failed. Dr Fowler succeeded in curing cases of Periodical head ache; in short I am of the opinion that it will triumph over all such head ache.

I shall say a few words on the use of arsenic in the Gout, I have more than once seen the good effects of Fawlers solution in misplaced gout, it is not to be used in the Inflammatory Gout. I attended a Gout" not long since, who had an attack of the Gout every morning, about 5 o'clock the pain of his breast & back were very excessive, & his respiration very much impaired, & he was scarcely able to move in his bed, the pain was so severe, that it very much resembled tetanus, this Gentleman had recourse to Fawlers solution in the proportion of 2 or 3 drops in the 24 hours, & it completely

Subdued his complaint. In my own person I have often experienced the good effects of arsenic when the usual remedies of bark & Colatib's tincture of Gum Guaiacum, this only tended to aggravate the disease. I remark that small doses of this medicine did no good, & even aggravated the disease, but in large doses it gave me relief almost instantaneous. I often watched the pulse & universally found it weak & depressed, & the heat of the body generally diminished under its usual temperature.

Dr. Darwin relates the case of a man 64 years of age that had laboured under an intermitting pulse for a long time, he says it was perfectly restored by the use of arsenic. Arsenic has been much celebrated in the cure of Angina Pectoris. Mr. Alexander an English Physician relates several cases cured by this medicine. From its good effects in the above diseases, we might suppose it might be useful in genuine asma, but of this I have no experience. In Epilepsy arsenic has also been found useful particular those cases depending on worms. In chronic induration of the liver & spleen arsenic has been found very useful; it appears to act like mercury. I don't think that arsenic has been in Hepatitis, but I suppose from its good effects in similar affection, that it may be found useful. I am inclined to believe that it will never be found useful in the management of hemorrhages, although it has been much recommended by some Physicians.

Arsenick has been much employed as a remedy for cancers. Dr. Martins celebrated cancer powder consists chiefly of arsenic, I have no doubt no doubt but that this powder has often cured cancers, I have visited Dr. Martins Patients with, & observed the good effects of his medicine, I have seen this powder used by Dr. Rush in cancers of the nose which occurred in our Hospital, in which a variety of medicines had been used without effect, but in a very short time after using this medicine, the Patient was discharged completely. Mr. Simmon has lately published a piece on the use of arsenic in cancerous affections, in which he relates several cases cured by this medicine. In various kinds of Strumous ulcers not cancerous the preparation of arsenic are highly recommended. In the open sores this medicine is better suited than to Strumous swellings because it always disposes them to suppurate, which is always to be avoided as arsenic often produces soreness of the mouth & Pharynx sometimes, it might be thought to be useful in Syphilis, it has been employed in some cases particularly in ulcers succeeding buboes & it is said with great advantage.

Arsenic disposes these ulcers to form good pus. In Venereal blotches it has likewise done good, & in Venereal Rheumatism it has been used with success. The external application of arsenic to cancers has produced apoplexy & death. a boy who had been advised to use the powder of arsenic for a certain disease of his head, died of apoplexy in the space of 5 or 6 hours. This shews how extremely cautious we should be in the

Exhibition of this powerful medicine. Now & then we meet with a case in which a large quantity of it is taken without detriment. A person gave to a Patient 3 grs. in one day without detriment. A lady took 150 drops of Fowler's solution in 24 hours in a cancerous affection, it had a powerful effect on the nerves —

January 10th — 1812 —

I shall not take up any of your time further on arsenic, when you are called to a patient, that has taken arsenic for the purpose of destroying himself I shall only say that the garlic smell is not always to be depended on, but for further information on this subject I refer you to Dr. Black's remarks, I shall conclude our lectures on the Tonics, by saying a few words on two or three articles, which altho powerful Tonics are not mentioned in Dr. Cullen's Materia Medica. Sulphuric acid is eminently entitled to the name of a tonic. It appears to be useful in almost all those cases for which I have prescribed bark. Elixir Cortical has become so common a medicine that we could not do without it in the practice of Physick. It is a very common practice with Physicians to use it in combination with bark in the latter stage of Consumption & it is said with the happiest effect. Dr. Pringle relates seven cases of Epilepsy that were relieved & some entirely cured by the use of this medicine. Dr. Ferriar relates of Singultus that occurred in a

73 years of age, that was cured very speedily by the use of the Elixir Vegetabile. It has been much used in pleurisy, I have used it myself in this disease & certainly with advantage, but I never thought it prudent to trust the cure to this medicine. Sulphuric acid has been much recommended by Dr. Sydenham in hemorrhages of red blood - I have no doubt but it may be sometimes useful in the hemorrhages which occur in the latter stage of small pox - Malignant & petisheal fevers, but I would not recommend it to the exclusion of other medicines. The Sulphuric acid diluted has been used in certain cutaneous affections nearly allied to Scrofula & some times with very good effect. An ointment formed by rubbing together in a glass mortar ℥j of Sulphuric acid ℥j of Lapis Lazuli, has lately been found to be a very good application to Rheumatic limbs, it can act only as a rubefacient - - -

Muriatic Acid, this deservedly the name of a tonic. 8 or 10 drops in a glass of water two or three times a day has been used with great success in Dyspepsia & similar affections. Dr. Finley in his inaugural dissertation, has mentioned several cases of Jaundice cured with this medicine, in what manner it acts I am unable to explain. The muriatic acid has been much used in Angina Maligna, combined with gum arabic & water in the form of a gargle, & I believe with great success. This practice has been highly recommended

By Dr Johnson Nitric Acid, may be given in such a quantity as to prove a tonic, but it has been principally celebrated in curing the Venereal disease Dr Preble of Charleston has related several cases in his inaugural dissertation which occurred in the above House in this city, he supposes, that they were all cured, but the same cases afterwards came under the care of Dr Shippen & my self, & were the most distressing & obstinate cases that I ever had seen - they resisted mercury for some time, but by perseverance we at last succeeded - Dr Scot, says that he has succeeded in curing venereal cases very effectually & that it generally salivates. I have not had a very extensive experience of this medicine, but I have had sufficient to convince me that little benefit is to be expected from it in Syphilis & I never knew it to salivate, altho I have given it to the extent of a drachm in 24 hours. Professor Haythorn says, that he found this acid very serviceable in those cases of obstinate sores, that succeeded the Venereal disease, & refuse to yield to mercury this has however never cured the original disease. It has been found useful in some cutaneous diseases resembling Leprosy, one of my Patients has taken two hundred drops of the Nitric acid with great relief, after excessive doses of arsenic (150 drops) Laurel water & mercury has been prescribed in vain - It has been used in Hepatitis, I have not employed

to my self in this disease, because it yields so easily to mercury. Dr. relates two cases of Hepatitis in which the nitric acid succeeded, in one of which mercury had been used, & I am inclined to believe that the mercury cured the disease—

Muriate of Soda a common salt is one of the most powerful Tonics with which I am acquainted, I might class it under the head of Stimulents all nations with which I am acquainted, use it except the Islanders it is of incalculable value as a condiment, by supporting the strength of the system, banishes from Cholera Dysentery & Diarrhea almost universally calls for salted food, by the exercise of what I shall the reasoning faculty, & I have often found the gratification of it of more advantage than any quantity of Coleridge bark or Gentian—Common Salt has been found an useful remedy in Typhus fever increasing the tone of the Stomach. Some of its good effects cannot be ascribed to its tonic power—Common salt has been found an excellent remedy in Hemoptisis, but it cannot be said to operate by its tonic power, for the nitrate of Potash has been found equally useful, which is certainly not a tonic—Many bad qualities has been attributed to salt, such as producing the Scurvy, laying the foundation for calculus & injuring the teeth, when carried to excess it evidently does favor the production of Calculi & Scurvy—

But in my opinion not so frequently as commonly supposed; I cannot conceive how it can induce the Stone, its constituents have been advantageously employed in this disease, it is true that the Islanders have excellent health, but it can be better explained in a different manner - Their diet is exceedingly simple, & the temperature of their climate is very inferior - Dr Bullen says that its immoderate use induces a saline state of the Urine, which is perceptible to the taste, he acknowledges however that it promotes digestion, when used sparingly - Dr Linn on the contrary could never detect the saltish taste in the serum of the Urine of a scurvy Patient, though he has repeatedly examined it, I never could discover a bitter taste in the serum of a person labouring under jaundice - We are often asked our opinion of the propriety of a sea voyage, I am inclined to believe that the atmosphere at sea is highly impregnated detrimental to consumptive Persons this opinion is not common, the benefit they derive may be attributed to another cause - The atmosphere of the sea is highly impregnated with saline vapours, you will ask why do Physicians generally prescribe, this kind if they have not found it of service; I answer that the good is much less than has been commonly supposed & in those cases in which it has done good, it can readily be attributed to the pure air & change of scene in foreign countries, a strong solution of common salt applied

as far as the Patient can bear has been found
 one of the best local remedies in the troublesome
 disease of Gastritis. It is of the opinion that the Gastritis
 being more frequent in the western States than the
 Atlantic is owing to the air in the former being less
 saline, but it is not a satisfactory explanation for we
 find the Gastritis as frequent in the State of New York
 near the lakes as in the Western Country. Lime
 when taken internally appears to be a tonic. It is one
 of the best remedies in Dyspepsia, but it appears
 to act in this case by absorbing a morbid acrimony.
 When there is no acid in the Stomach, a glass of lime
 water & milk has evidently given tone to the
 Stomach. A combination of lime water & milk
 I have found very effectual in checking the
 vomiting in bilious Yellow fever. In my Arth-
 retic vomiting, I have found this of essential
 service. In the black vomiting of Yellow fever
 it does not appear to be of much service, nor indeed
 does any thing else, I have never seen but a single
 instance of a recovery after the black vomiting had
 appeared. I was consulted some years ^{ago} in a case of
 yellow fever, where the black vomiting had come
 on. I advised the use of lime water & milk. By
 mistake the cream of lime was used in the same
 quantity that I had prescribed the other. Instead
 of producing any bad consequences it had the
 happy effect. The vomiting was suddenly stopped
 & the Patient got well. Lime water & milk has
 been used in chronic Diarrhea & often with advantage.

January 11th -

It remains to say a few words, & conclude the class of Tonics, as to the Lithontriptic virtues of lime water, I shall say more hereafter. Lime water with linseed oil is well adapted to some cases of Gonorrhoea but not in the inflammatory stage. In fluor albus injections of lime water & milk has often ^{been} serviceable. One part of sweet oil & four of lime water forms an excellent application to burns & scalls. a solution of corrosive sublimate in lime water has lately been recommended as an application to old ulcers.

Muriate of Lime formerly the fixed ammonia is prepared by dissolving carbonate of lime in muriatic acid this by evaporation & crystallisation, forms a salt remarkably deliquescent, & in this dissolved state we usually exhibit it. The muriate of lime has been given in Dyspepsia Pectic fever & particularly in Scrophula - the usual dose is from 8 to 10 drops gradually increased to 18 or 20 two or three a day. It must never be given in such doses as to produce much sickness or purging. I have used the muriate of lime in a case of a young lady affected with open Scrophulous sores & with evident advantage.

Mr. Saunders has found it of great service in indurated scrophulous swellings, I have never used it except in the open sores. I have employed the muriate of lime in a case of Gastre, with the best effects, my patient had taken the Metric acid for some time, it had checked the progress of the

Disease in a great measure, but was unsufficient to produce a cure. In this case the muriate of lime succeeded completely. Barytes is one of the primitive earths it is found native combined with sulphuric & carbonic acids. With the latter it forms it ~~forms~~ a very powerful & pungent medicine. It is certainly a violent poison. Dr. Adair Crawford was the first who introduced this medicine into practice, he employed it in Scrophulous & it is said with success. It has of late been exhibited in Pectic fever, & we are told that it improves the appetite & the strength of the system, sometimes it produces violent effects as Vertigo, Palsy & even death so that we must be extremely cautious in the use of this medicine.

The muriate of Barytes has been used in cancer but with what success I have not learned.

Mr. Parsons has suspended the progress of several ulcers on the legs by the use of this medicine. But he says it is uncertain & not wholly to be depended on the dose is from 6 to 8 drops - - -

Incitantia or Stimulents By these

I mean a set or class of medicines, which produce a more vigorous action in the moving powers of the System, increases the frequency & force of the pulse increases the heat of the body & raises the power of sensation. Dr. Brown places opium at the head of his Stimulents, he has the following order viz- Opium Ether Musk Volatil Alkali. If I were to arrange them I would place them thus - Ether - Musk Volatil alkali strong drink & opium at the end -

Ammonia or Volatil alkali, I shall begin with
 this article altho I do not consider it as one of the
 most powerful of the Incitants - Ammonia is an
 important & I may add an indispensable article of
 the Materia Medica - In placing this article here
 I know I differ from Dr. Brown & other Physicians
 he considers it much less stimulent than opium
 either much & strong drink - Dr. Cullen places
 this article in his class of antispasmodics It is true
 that ammonia relieves pain in the Stomach in
 cases of Gout, & here it may be said to be an antispas-
 modic. But I shall have no class of antispasmodics
 in treating of the different articles of the Materia
 Medica, Some writers strenuously affirm that
 ammonia is entirely of an Animal origin -
 This opinion might be excused in the Antients
 but when we hear men giving such sentiments
 at the present day, we shall certainly conclude that
 their knowledge of natural history must be very
 limited. Ammonia is obtained in great quan-
 -tities from nux Cornica, from the green Horse radish
 turnip cabbage & from the muckrown in great ^{or} quantities
 than from the animal kingdom, I do not say that
 ammonia exists ready formed in the articles I
 have mentioned; but they contain the constituent
 principals of ammonia, & these are only contained
 in the animal kingdom. I don't say that ammonia
 The Volatil alkali has been given, both in the
 hot & cold stage of Intermittants. In the cold it is
 said to prevent the violence of the hot stage -
 & render it less durable, by exciting perspiration -

I have no doubt, but that ammonia might be serviceable in certain cases of Interm., particularly in those cases which have tendency to Typhus, but I never should think of giving it during the violence of the inflammatory state of the system. In Typhus fever the Vol. alkali has been spoken of in the highest terms by Pringle & Huxham & many others, but I think the indiscriminate use of it to be highly injurious particularly in the first or inflammatory stage of that disease & only in those cases where there is a feeble pulse & great prostration, would I advise it to be given. In Typhus fever there is most always an apyrexia in once or twice in 24 hours, & this is the most proper time for its exhibition - or other stimulating medicines. In certain stages of Puerperal fever and when all inflammatory action has subsided & there is more or less tendency to Typhus, the Vol. is one of the most important remedies. In the Pneumonia Typhodes, which I formerly described, the Vol. alkali has been much recommended and a warm & damp atmosphere is very favorable for the generation of this disease.

In certain cases of Pneumonia with difficult respiration, & after the inflammatory symptoms have been subdued by bleeding, the Potable alkali may be safely exhibited, not only as a stimulant, but as an Expectant - Mine Whey is thus prepared, take a gill of the best white wine either mader or Lisbon or berry and a quart of milk, this latter is to be boiled for a certain time until

It rises to the top of the vessel, the scum is then to be added & the vessel to be removed; & set near the fire in 5 minutes the coagula will be formed, the liquor is then to be passed through a fine piece of muslin gently or Gauge, it will be perfectly transparent if well made, the proportion of wine may be somewhat larger & if too strong it may be made weak with warm water.

In the latter stage of Phthisis when the cough is troublesome the pulse weak & great debility the exhibition of ammonia is attended with the best effects, it does not flush the cheeks like most other stimulents, In the very obstinate cough or rather hoarseness which succeeds measles the carbonate of ammonia & tittle Gum Guaiacum with the best effect. In chronic Rheumatism Dr. Ferri of this City has used ammonia in regular Dose & he says with great success. I have never employed it in this disease, I have frequently employed Vol. Alkali in Hemiplegia with advantage; altho it would never entirely perform an entire cure. The periodical Headache which I formerly mentioned was cured by bark, may be safely cured by ammonia, when the bark cannot be easily be obtained, but you must remember that it is not to be given in the time of a Paroxysm. The Vol. Alkali has been used in hooping cough & in Cholera Picturnum, but with what success I have not been able to learn. In Typhus fever the Vol. Alkali will alter the colour of the tongue sooner than any other medicine.

January 14th 1812 -

The Colatit alkali has been much employed in Dysentery by Dr. Martiney, he says it appeases the griping & tenesmus & is peculiarly adapted to those cases of Dysentery which show a tendency to Lymph in chronic Diarrhoea the use of Col. alkali, opium & the application of leisters are often the best remedies - The Colatit alkali appears to be well adapted to certain states of Dyscrasia: It stimulates the stomach to a more healthy action, & effectually neutralizes the acid - The Col. alkali in union with Guaiacum &c in the form of a Colatit tincture of Guaiacum is an excellent remedy in certain states of Dropsy & in visceral obstructions, I have succeeded with this medicine when fox glove & squills have failed -

I shall now speak of the Colatit alkali used externally, it has been recommended in various species of ulcers - Dr. Martini tells us that he cured a cancer entirely by the use of this medicine 4 years after the Dr. says he found the medicine more effectual when given internally as well applied externally to the ulcer -

A Dutch Physician recommends the caustic alkali to malignant ulcers of every description Mr. Hufeland says that he succeeded completely in curing a scrophulous cancer of the lip by giving 15 drops of the Opt. of ammonia 3 times a day & gradually increasing it to forty drops, this was continued for three months when the disease was cured - In the East Indies the Col. alkali is considered to be a specific against the effect of the bite of venomous serpents - Dr. David Ramsay of Charleston

In South Carolina has related several cases of the bite of the viper, that was cured by the Carb. alkali. I do not place much confidence on these cases because the Dr. did not see them him self - The Alto Fontana has practically had more experience on this subject than any other man - The result of his experiments was that the alkali did not seem to do the least good & in many cases it evidently exasperated the disease - Serventi expressly says that ammonia was not of the least service in any of the cases in which it tried. The bite of a viper is not always so fatal as has been supposed. I once caused a bite to be inflicted on a rabbit; the animal was afflicted very severely & passed black & bloody stools yet it perfectly recovered in four days without any aid; this case shows us the great power of nature in curing diseases - Dr. Tupot & many others have employed it in Rabies Canina, but I suppose the virtues of the medicine in this disease has been greatly exaggerated - The terrible wound inflicted by the Scorpion has been said to be relieved by this medicine, but in this respect there is some fallacy. The carbonate of ammonia given in the form of a bolus or pill, with conserve is said to have some advantage over the other preparations, for like opium it is said to be more permanent in its action & to be more easy on the stomach. My favorite manner of giving this medicine is in the form of an emulsion, made by rubbing together 1 dram of the carbonate of ammonia with 2 drams of Gum arabic & an equal weight of sugar.

With 10 ounces of water, a table spoon full may be given 3 or 4 times a day pro re nata Musk. This when good I consider far more Stimulating than opium I have never before spoken of this article in this place, but I am convinced from much reflection on the subject, that my present arrangement is better than any I have hitherto made. I am at a loss to determine whether it may not be placed before Col. alkali, it is one of the most important medicines that we are acquainted with. There is much greater affinity between musk & Potabil alkali than between the latter & opium. Musk is obtained from a species of deer, the musk deer, which is found in the northern part of Asia. The musk is contained in a little cyst, situated near the umbilicus in the male - The female has none of this medicine. Musk is the most odorous substance in nature, it is likewise inflammable & its taste is very bitter. It consists of resin & gelatinous matter, genuine musk may in general be distinguished by the strength of its smell, a fatty feel denotes impurities, but a mealy one a good test. Dr. Cullen has placed this article under the class antispasmodics, it is a most powerful stimulant & I do not hesitate to say it is - In small doses it evidently increases the frequency & force of the pulse but this medicine is much more perceptible when in large doses - musk exhilarates the spirits & strengthens the system, hence its use in diseases of debility. Sir John Pringle was very much attached to the use of musk in the Gout of the Stomach we have likewise the testimony of Dr. Cullen

In favour of genuine musk. The Dr. tells us he was called to see a young man affected with a violent head ache as a symptom of gout, he ordered a large dose of musk, but it did not relieve him in the smallest degree. The Dr. supposed that his medicine was not good, ordered a fresh parcel & the Patient took another dose which relieved him immediately from analogy we should suppose that Musk would be useful in tetanus. Dr. Hillary says that he has often prescribed it in combination with opium his Patients he tells us were more relieved by this compound than when he gave either of them separate. Dr. Owen relates a case of Episthotomas cured by musk, when opium, the petre gums & the extract had been used without effect. He says the first dose was hardly in the Patients Stomach before the Spasm began to abate. The Chinese are said to be very successful in the management of Hydrophobia by the exhibition of musk in combination with cinnaibar. Dr. Hillary also relates some cases of the good effects of Musk in Hydrophobia. I have some reason to believe that the virtues of musk has been greatly exaggerated. Dr. Linton speaks very highly of musk in spasmodic asthma. Altho. I have never used this medicine in this disease, yet I can readily conceive that it might be useful. Musk has been recommended in hooping cough, but I suspect it has not done as much good as has been supposed because Stimulents of every kind often do much mischief in the inflammatory state of this disease.

yet in the more advanced periods I don't deny that
musk has been serviceable.

Colica Picturum when induced by lead has been
Dr. Hillary says by the use of musk & opium. In low nervous
disease when subcutaneous tenderness comes on, has been
more speedily relieved by musk than any other medicine.
Dr. Mead recommends it in all putrid fevers - where
convulsions are present. It has been given in the
confluent small pox & in gangrene, but how far it
is to be trusted I am unable to determine. Dr. Trall
says he never found it serviceable either in Hooping
cough small pox or in gangrene. He generally
prescribed it in 10 grs or upwards. Dr. Cullen gave
it from 10 to 30 grs. In this country so large a dose is
seldom if ever prescribed. However I am firmly of the
opinion, that it is only in large doses that we ought
to expect benefit from the use of musk, & the high
price of this article will probably prohibit the advan-
-tage that we might otherwise expect. Margraff was
the first who discovered the manner of preparing
artificial musk, which is said to possess nearly
all the virtues of the genuine musk, he directed 9℥
drams & a half of nitric acid to be poured on a dram
of oil of amber in a porcelain cup, this is to be
gently stirred & then set aside for 24 hours, a resinous
- substance will be found floating on the
top of the liquor, which is taken off & washed first
in cold water then in hot, to deprive it of any
acidity, this is to be kept in bottles well stoppered
Professor Hufeland recommends the artificial musk

In Hooping cough & in all nervous diseases, where the genuine mustk has been found useful, he prescribed it in the form of an emulsion, with oil of almonds thus tea spoonful of which he gives every 3 hours.

Narcotica Pappaveracea & first of opium. The seed is obtained from the long white headed poppy; the popper *Somniferi*. It is a native of the east, & is a considerable article of commerce. It is brought to us from Egypt in the form of cakes covered with leaves of the rumex arborescens, a pinna when cut has a very strong & to some a very disagreeable odor, but to me a delicious flavor. There are various opinions about the manner of preparing opium. Some say it is prepared by boiling the poppy heads, others say that it is the inspissated juice. I believe Mr. Linn has given us the most accurate account of preparing this article, he says that the poppies are planted at the distance of 6 or 8 inches from each other, & they are well watered until they are 6 or 8 inches high, the watering is then discontinued until they are about half grown. At sun down 2 incisions are to be made in each foot from below upwards the juice is collected in a flat earthen vessel, which soon congeals when exposed to the sun, the cakes are sometimes purified by boiling &c. but more generally wrapt up in leaves & exposed in this manner. The seed of the poppy contains none of the narcotic principle & is perfectly inert. The dark colour of the opium (says Dr. Cullen) is owing in a great measure to the iron instrument used in preparing it.

Dr. J. Metcalf has proved by experiment that the dark colour is not produced by the iron instrument, he found the opium to be of a dark colour no matter in what kind of vessel it was prepared in. Opium has been raised in our country, tho in inconsiderable quantities. Mr. Richardson has made opium on the north river, it has also been made in many other States. Experiments have been made, & it has been proven that it can be raised from Georgia to Hampton. It has also been raised in New Jersey. I hope the high price of this article nor any other consideration will ever be an inducement to cultivate opium in this country in any considerable quantity. The miseries of our country men resulting there from want be innumerable, I have said before a very good narcotic is made from a tincture of the Lopo. In Edinburgh they have lately used a tincture of Lectrice, which is said to possess very considerable narcotic principles.

January 15th.

Opium seldom comes to us in a pure unadulterated state, it is said to be combined with conyding, but I conceive this to be very improbable 3 or 3½ parts out of 12 are impure, tho I am far from believing to being so impure as has been commonly supposed.

Opium is a gum resin, a sediment which is deposited from a solution of it in water, will be readily taken up by alcohol, & that which is deposited from a solution

of the latter is easily dissolved in distilled water - The proportion of Gum & resin are nearly the same, that of Gum being a little predominant - The bitterness of opium resides in its gum, while the resin contains the astringent principal, the Narcotic principal appears to be attached to both but more particularly to the resin. Dr. Croom thinks the narcotic principal to reside wholly in the resin, but for this assertion there is no foundation - What is the nature of this narcotic principal I shall not attempt to explain. The Chemists have sought in vain for an analysis of it. The resin of opium appears to be of two kinds, one Volatile & the other fixed the first is often dissolved by the heat of the boiling water. The salts that are often found in opium are accidental, they add nothing to their narcotic power. I shall now proceed to mention the external effects of opium. When applied to the eye, the internal membrane of the nose the Urethra or any part of the surface of the cuticle producing great pain attended with a sense of heat but after a time the morbid sensibility is diminished. It has been disputed whether any of the preceding effects are produced before a diminution of sensibility - Dr. Sam. Croom has made several experiments with solution of opium on his eyes, in his nose Urethra & other parts, in all of which considerable pain & inflammation ensued - Altho the sensibility of the part were at length diminished, he concluded the

Primitive action in opium is always stimulating
 I must however observe that these stimulating
 effects are not so considerable as has been supposed
 & that it is not be altogether discharged in inflammatory
 diseases. I have never known an instance of any ill
 effects arise from adding the Tinct. opii to an injection
 for Gonorrhoea - Green says he never found
 any narcotic effect produced by the external
 application of opium. Dr. Suster & Plateurs have
 made the same remarks - In opposition to these
 Mr. Saurie a French Physician asserts that he has
 found all the good effects of opium, when
 externally applied, that is observed from its
 use internally - In confirmation of this
 Dr. Wright tell us that ^{he} has often perceived the good
 effects of opium externally, in sickness & spasms of
 the Stomach. Dr. Cullen testimony in favour of the
 external use of opium is not to be overlooked - The
 Dr. says he has often relieved spasms of the bowels
 very promptly, by applying an opiate plaster to
 the abdominal region, but he recommends
 opium in a liquid form, in preference to an
 opiate plaster, the pain of a carious tooth has
 often been relieved by opium applied to the
 temples, think there remains not the least doubt
 of the powerful action of opium when applied
 externally its action in lessening pain has
 been too obvious not to have been observed by
 almost every practitioner -

Opium when used externally reduces the pulse without much previous excitement, at least much less than when taken into the stomach

Mr Rittenhouse was for 34 years affected with a painful & often violent disease of Stomach which was always relieved by an opiate plaster of laud. & meal applied to the Epigastric region. It often induced costiveness, which was very troublesome, but he always experienced so much relief from his pains, as to induce to declare just before he died, that it made the way much easier to his god - A lady who is very often a patient of mine on account of a violent in her head, finds relief from nothing so effectual as an opiate plaster to her temples - A Physician at Florence in Italy has long been in the habit of using an external application of laud & opium to the head in order to produce sleep - He says this composition procured sleep most always from an idiot boy 11 years old, who had been very wakeful from insanity - I was once called to see a child that had been badly scalded, an ignorant person who had first seen the child, applied laud. to all the burnt surfaces with produced a most violent fever, Delirium succeeded & the child died - A young lady that I once attended for a Pneumonic aff. affection, was advised by an officious female friend to apply the leaves of Stramonium to a blister which she had on her breast, in a very short time after their application I was sent for & found my Patient in a

Violent fever, with a flushed face Super Delirium &c-
 after discovering the cause of the fever &c- soon ceased
 by washing the delirated surface with warm water
 & applying a mild ointment. In what manner
 does opium act when applied to the skin? Does it
 act on the nerves, or ^{is} it absorbed? In my lectures
 on Camphor I shall enter more particularly on this
 subject, at present I shall only observe that
 opium in a solid form can never be absorbed
 but I cannot deny that when used in a liquid form
 it does enter the circulation, especially when
 friction is applied. Dr. Mussey I think has fully
 established the doctrine that absorbent vessels do
 open on the surface of the body, this is particu-
 -ly the case of an fishes-frogs & serpents. I have my-
 self made several experiments of on frogs & other
 animals in order to determine this point

Dr. Munro has covered the external coat of fishes
 by injecting of quicksilver in the cutaneous
 absorbents. I shall now proceed to examine the
 effects of opium on the Vital Natural & Animal
 functions, when opium is taken internally
 the pulsation of the heart & arteries are increa-
 -sed in force & frequency, the heat is somewhat
 increased, but not very considerable, the respi-
 -ration not much quickened, but after a time
 it becomes slow & somewhat stertorous Apoplexy
 is sometimes the consequence. Friend Haller
 & many others have proved that the primary effect
 of opium is stimulating, but when several hours

Have elapsed & a diminution of action in the Sanguiferous & other Systems are the consequence. You are not then to consider Dr. Brown as the first who considered opium a Stimulent. Yet much praise is due to this celebrated man for reviving & establishing an opinion that had been nearly extinguished -

January 14th - -

The experiments I am about to relate ought to be deferred on, as they were made by a very able man. (Dr. Brown) I shall relate them nearly in his own words, the room in which they were made was very still, the Dr. made several experiments on opium in order to ascertain its effect on the pulse after a slight breakfast when his pulse was at 70 in 5 minutes it rose to 74, in 10 & 15 it rose to 76 beyond which it did not go - in 20 - 34 & 35 m. it was 74 in 35 & 44 - 72 & in 60 down to 70 - Dr. also tried the effect of opium on a young & healthy person, whose pulse was naturally at 44, he had never taken opium in any form before - In 5 minutes after taking one gr. his pulse was still 44 in 20 & 25 m. it rose to 50 in 30 m. 52 in 35 m. 54, in 40 - 45 & 48 m. 50 in 60 - 70 m. 46 - in 80 m. 44 - in 180 - 44 the natural standard. In half an hour he always felt his mental faculties much invigorated, but in two hours he felt a disinclination to motion, therefore tremors of the limbs, I think these experiments are very conclusive for more particular information see Dr. Brown's book - Dr. Haller paid much attention to the effects

of opium in the latter part of his life, he was compelled to use it relieve his great sufferings, & he thinks there is nothing better established, than that opium is a powerful Stimulant. ~~He~~ constantly found that an injection of laud. always increase the fulness & frequency of the pulse Dr. Walston says that a single grm. never failed to raise his pulse from 76 to 86 in a very little time, this gentleman extended his experiments to some of the inferior animals, he laid bare the hearts of several frogs & applied to them a solution of opium, their pulsation was evidently & remarkably increased. Dr. S. Bard of New York published an essay in the Edin. med. Com. in which he endeavoured to prove that opium is a direct sedative. I think his experiments by no means conclusive, because he says nothing about the pulse for the first half hour, after taking the opium (Dr. Croom) has proved that the greatest elevation of the pulse is to be observed in that period.

Mr. Baurdean asserts that the action of the vessels is not only increased by opium, but that the diameter of the arteries are also considerable enlarged.

Martin tells us that he never found the heat of the body to be increased under the use of opium this he says was ascertained by the Thermometer to the skin - But we all know how liable we are to be deceived by this instrument Ternates aurium which we always find from a person taking opium, a temporary deafness is also frequent by the consequence, I have seen many persons die from taking opium, & to appearance with a true apoplexy. It was indeed what Dr. Cullen called apoplexy renerata.

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The effect of opium is most always to impair the appetite, & with many people to induce vomiting. Dr. Crampe is of the opinion that all the secretions & excretions are restrained by opium except perspiration, I am certain that this opinion is unfounded. I know that the semen, the bile & Saliva is almost always increased, even Dr. Crampe acknowledges, that Venereal diseases are increased by the use of opium. Opium does not always stop the discharge from the bowels, sometimes it produces quite the contrary effect, in a torpid state of the bowels opium frequently purges—

Calicea picturum is attenuated with a torpor of the whole alimentary system & here opium almost always proves to be a laxative. Sometimes in a Diarrhoea opium increases the discharge particularly if there is much fever—Catalepsy—a disease in which there is a sudden cessation of motion, & sensation, the body remaining in the same posture in which it is seized—If we give opium in this disease, it seldom fails to purge; I had a Patient a young lady with a catalepsy, who took as high as 24 grs. of opium in 24 hours, she never required laxatives after she began to take 8 or 10 grs of opium in a day—Opium is often remarkable producing flatulency hence it is frequently a good carminative I suppose it operates by a stimulating quality—Dr. Opium a Diuretic or Bartholine & other writers have both used it in abdominal Dropsy with considerable advantage—

Dr. J. Moore has also mentioned some cases of this kind
 where opium was useful Dr. Haller did not find the
 quantity of urine, saliva, or mucus of the nose &c.
 either diminished or increased. Mr. Parsons placed very
 little confidence in the Diuretic effect of opium -
 I am far from asserting that opium is always diuretic
 but in many cases where it is given in combination
 particularly with digitalis it often proves considerably
 diuretic. Dr. Mackenz says that opium often increases
 the Saliva. But I have never observed this - Opium increases
 the perspiration, which generally increases with the pulse
 but it does not diminish as the pulse becomes slow.
 The exhibition of opium is often followed by a trouble
 = some itching, this is generally prevented or alleviated by
 drinking a bowl of warm tea - which increases perspi-
 = ration, often we observe disagreeable boils to follow the
 use of opium. Stramonium frequently has this effect
 Haller says he could perceive the smell of opium in
 his perspiration; this would seem to prove an absorp-
 = tion of our medicine, but I believe there is nothing
 better established than ^{that} the Stimulating effect of opium
 are produced by its action on the nerves - Baer have
 gave a lump of opium to a dog shortly after which
 he died - The animal was opened & a more than
 usual quantity of bile was found in the Duodenum
 this proves what I formerly mentioned in the effect of
 opium increasing some of the secretions -
 In the animal functions opium usually produces
 great hilarity which is sometimes augmented
 to a pleasing delirium, it disposes to venereal
 pleasures -

Even in persons advanced in life, hence the analogy between opium & ardent Spirits are very considerable. Opium after a time induces sleep, an inclination to sleep, tremors, Convulsions, & sometimes death. These symptoms are not always uniform. I have never seen convulsions excited in the inferior animal after too large a dose of opium; altho I have often seen them killed thereby. Dr. & Wilson has however frequently seen animal convulsed by opium & symptoms induced very much allied to tetanus. Dr. Barton concluded the lecture with an eulogium on the talents of Dr. Breuer —

January 18th —

The Persians are so much in the habit of eating opium, that they often swallow pieces the size of their thumb & then drink a cup of remizgar after it, this has the effect of diminishing the narcotic effect of opium but it does not in the least lessen its stimulating qualities, this been proven by Dr. Lee, we are told by a very respectable author that the Persians are in the habit of spicubling in opium houses every day for the purpose of drinking the cordial decoction & exhilarating their spirits sometimes by swallowing an opium pill, & then set or lie down on a Sopha with every vendor of opium is furnished. And must wait patiently for its exhilarating effects. — They are excited so much at times as to be furiously mad. Dr. Lapsus relates a very interesting case of a woman 60 years old who died at taking 36 grs of opium.

He found her in a state completely apoplectic, she had taken Opium without effect - Verigas was then prescribed. She recovered so far as to tell them what she had done, but soon after died, permission was obtained to open the body - And the following effect was observed, the vessels of the Stomach, were much distended, & its internal coat shewed that a violent inflammation had taken place, erosion of the coats were found in many places the Mesenterium was evidently gangrenous, but the inflammation did not extend to the small intestines the brain was injured. In yellow fever when the Stomach is the principal seat of the disease we usually discover the effects of violent inflammation, but in no case does this inflammation extend to the brain.

The analogy between Opium & wine is very considerable they both increase the force frequency & fullness of the pulse the heat of the body & the exhilaration of Spirits; they both intoxicate & dispose to sleep, & when long continued destroy the tone of the Stomach & impair the appetite. But Opium like wine does not always increase nausea - I once gave 15 grs. of Opium to a young lady with mania which brought on a sound & lasting, she awoke perfectly recovered & has continued so ever since.

I shall now proceed to speak of the use of Opium in diseases, & first in Intermittent fevers, the use of Opium in fevers is not a modern remedy, it was often prescribed by Galen under the form of Theriaca andromedica, the activity of which depends ^{on} Opium. The Italians found it of great service in the quartan ague. Paracelsus

Also prescribed ~~prescribed~~ it, as likewise did Etm-
 -uller, who had a high opinion of its virtues. The
 publications of Dr. Lind are those that are chiefly
 valued. Dr. B recommended an opiate pill ~~was~~
 to be given an hour before the cold stage of an
 Intermittent, & he says that it has prevented the
 paroxysms altogether. Dr. Lind has found opium
 to be of more service, when given half an hour
 after the commencement of the hot stage, he says
 that it very generally shortened the paroxysms
 by inducing a copious perspiration. He has never
 known a tendency to delirium increased by this medicine
 altho he thinks it very proper to defer giving it when
 this symptom is present. Dr. Lind says that when Laud.
 says that when Laud. is given in the hot stage of fever
 it often produces sleep, from which the patient awakes
 perfectly recovered. The Dr. never saw a Dropsy or jaundice
 follow the use of opium in Inter. when opium
 induced costiveness he gave it combined with the
 Tinct. Sacra. From my own experience on the sub-
 -ject of opium, I should be very unwilling to prescribe
 it in the manner prescribed by Dr. Lind. I think
 our Patients would be much the worse by it, yet I
 don't contradict what the Dr. Lind has asserted.
 we must recollect that he practised in warm climates
 & in the fevers of all warm climates, Stimulating
 Remedies may be given with much less detriment, because
 the dissipation to sweat is much more considerable than in
 less temperate regions. Opium or Laudanum may be given in
 much larger doses, in a cup of Strong Coffee than in any other
 Menstruum in this way it sits easy on the Stomach, and its
 narcotic effects are much less considerable.

Carminative made several experiments with opium in
 union with the common green coffee, he found that ani-
 mals could take a much larger quantity of opium when
 combined in this manner; without inducing death-
 than when given alone Mr. Hufeland has often prevented
 the paroxysms of an intermittent by giving Dover's
 powder (which contains opium) half an hour
 before the expected paroxysm. This practice is in some
 cases highly commendable, I firmly recommended
 bark in Miercuria, I think that opium is not
 less valuable, particularly in those cases which
 have an ~~ten~~ arthritic origin. A gentleman
 applied to me sometime ago for a pain in the cap
 of his knee, as there appeared to be but little inflamma-
 tion, I recommended him to take a purge & he believed
 & he cupped on the inflamed part, this was done but
 without any relief to his pain, he then applied
 without my relief advice) a solution of the sugar of
 lead & the pain ceased almost immediately, he
 mentioned to me that, ^{he} had sent out a cure, but
 in about 9 hours after the application of the lead
 I was sent for to see my patient who was said
 to be dying; he was in extreme agony from
 spasms of his stomach, I advised sinapisms to
 his feet, which soon had the desired effect;
 At next morning after my patient was seized
 with a violent hemicrania, for which I gave
 him opium, he was sensibly relieved by it & the
 disease soon went off, he has since had returns of
 his complaint, but was always relieved by some medicine

January 21th

I am now to speak of the use of Opium in fevers, more strictly continued, and first of Typhus fever. This fever evidently has Remissions and Exacerbations and strictly speaking there is no such thing as a continued fever at least I have never seen such a case in this Country. I beg leave to correct an Error of Dr Cullen, he is of the opinion that Typhus fever owes its Origin in every instance to putrid animal effluvia in this Country it evidently arises from the same cause as intermitting fevers as I have before fully proven when stripping of both all the typhus fevers that I have not with have ~~not~~ been inflammatory in the first instance what ever may be the genus be the difference between the yellow fever I am unable to determine but I am convinced that typhus fever may and after is propagated can begin when as the yellow fever never is the delirium accompanying the first stage of typhus is generally dependant on a spren tensive state of the vessel of the brain in this stage Opium is ~~now~~ always to be forbidden it always ~~does~~ does mischief and the benefit is much preferable but in the second stage or at third stage of typhus delirium is always produced by extreme debility which pervades the whole system & here opium is the best remedy - Dr Sydenham tells us he employed debilitated remedies in the Epidemic fever of the year 1661 & 4 untill the twelfth day after that he gave Opium with great advantage - I don't think it advisable to limit the time of using opium till the 12 day or any other day, it would be much more proper to be guided by the pulse, & the strength of the system - Dr Cassinell who has published a work on Typhus fever could never discover a great difference between those who took opium & those that did not - Dr Gulchrist has often cured a rarer delirium by opium -

He adds that it prevented sweating & very often promoted a discharge by the skin, particularly in combination with camphor - Dr. Cullen - notwithstanding the error he entertained with respect to the operation of opium exhibited it with great advantage in Typhus fever -

The Dr. Cullen has found the following doses to be of great service in raging mania, from 1 to 1½ grs of opium & from 10 to 15 grs of camphor - are to be made up into a bolus with conserve; to be taken at once - In the tremors & subcultus tendinum which so often accompanies Typhus fever; various stimulating medicines have been used, they evidently depend on great debility - Must have not answered our expectations, in these cases opium is the medicine which promises a greater triumph than any thing we have hitherto tried - Diarrhea is a frequent Symptom of slow nervous fever; this is treated effectually by opium in combination with some mild astringent - You must not suppose from this that I recommended the bowels to be kept costive on the contrary; I think it of the utmost consequence to have them well opened

The exhibition of opium in Typhus fever has with me always been a matter of much necessity - we should never forget that the Stimulus of opium is very transient & unless we take care to renew the dose, before it has worn off, a dangerous state of debility will be the consequence - Agree while we are giving opium to Patients in Typhus fever we should always watch its effect on the skin - It often sweats profusely & thereby reduces the system

Which it was given to prevent - Dowers powder is sometimes hurtful in this disease, upon the same principal viz its diaphoretic tendency - I should as well think to do as well without the lancet in Pleurisy as without Opium in the Typhus fever - I do not consider Opium an important remedy in the yellow fever, it is always injurious in the 3 or 4 first days; It fails to check vomiting, & it often increases the pain in the head & back; also by promoting the accumulation of feces it frequently does mischief. Opium gradually increases the pain in the liver, I have seen a single grain renew the pain after it had been removed by bleeding. I don't mean that opiates are never useful in yellow fever; the above remark applies chiefly to the first or inflammatory state of the fever - When the inflammatory symptoms have been entirely removed by depleting remedies when the pulse is small & weak, the Stomach remaining very irritable with frequent vomiting & above all when there is excessive discharge by stool; Opium is not only safe but highly useful - I have often given large doses of Ether to allay the violent vomiting which sometimes attends yellow fever - And seemingly when the irritation is kept up by a slight degree of inflammation - The Plague we are told is a highly inflammatory disease at its commencement, but that it soon becomes Typhoid & terminates with symptoms of universal debility Opium according to the rules I have delivered must be injurious in the first stages, but an important remedy in the 2^d stage of the disease -

Of the use of opium in Phlegmasia Inflammation is divided into active & passive the first we discover in acute Rheumatism, pleuritis, Hepatitis &c which are to be remedied by the lancet - & the antiphlogistic remedies of the Second or passive inflammation, we have a good example in the inflammation of the tarsus of the eye - Lead water & other cold astringents always do much chief in this complaint, It is to be cured only by brandy & water by laudanum, or by some of the preparations of copper, which are known to be stimulating - Stimulents are sometimes useful in the latter stage of acute inflammation, when an extravasation takes place; opium always promotes absorption.

The following is a golden rule with Dr. Young respecting the use of opium; that when bleeding is indicated opium should never be employed." To this rule there are but two exceptions viz. In jaundice during the passage of the gall stone through the biliary ducts, the pain sometimes so acute as to require opium & at the same time bloodletting. In Nephritis likewise or during the passage of the stone through the ureter, bleeding & opium are prescribed judiciously at the same time. Opium will sometimes promote the suppurative state of inflammation & lessen a good deal of pain. In Pneumonia where a good deal of inflammation is present, bleeding purging blisters cold, but not cold air, I would think were the proper remedies & that opium would be inadmissible. We find however that Dr. Keen Huxham, & other respectable writers have prescribed it in this disease, Dr. Keen says that after the patient had been largely bled, nothing is so effectual as linseed oil & opium.

The inflammatory Symptoms generally continue sometimes in Pneumonia & I conclude that opium is hurtful in this disease, unless it disposed to Diaphoresis, which however is not always the case. Old People when affected with Pneumonia Nottha bear bleeding remarkably well, and all the antiphlogistic regimen, during the continuance of the inflammatory Symptoms we must not think of giving opium to relieve the cough.

In the inflammatory diseases of old People, it is better to bleed frequently, but in small quantities at a time; by purging on aposite plant we shall sink our Patient in a dangerous ^{state} of debility.

Catarrh in its first stage is always of an inflammatory nature, hence opium is inadmissible, but after some time has elapsed when we have reason to believe that a troublesome cough is kept up by irritation & debility, then you will find opium a valuable remedy, for this purpose the following ^{Brown Mixture} Mucilaginosae is an excellent preparation. Take of the tincture of opii Camph. aa one ounce Vin. Ant. qtt. 80 or 100 of the extract of liquorice & Gum Arabic aa from one to two drams of boiling water 8 ounces of this mixture the Patient is to take from one to two tea spoon fulls every

Two or three hours according to circumstances. In the management of a cough in Pulmonary consumption, I find the above mixture to be an excellent one, with the exception of the ant. Wine. which generally passes the night sweats. I sometimes employ a smaller quantity of Paragoric - & add a little of the Vin. Ipecac. as Paragoric is a valuable preparation of Opium, & is so generally in use, it may not be a miss for me to mention the best manner of preparing it. I object to the above. The London College directs the following. Take of laid purified Opium reduced to powder, flowers of Benzene each one dram Camphor one two Scrupels, of aniseed one drachm proof Spirits two pints, digest for 10 days & strain. I object to the above, first because the oil of aniseed is a heating medicine, & adds nothing to the virtues of the Elixer, & secondly its very high price will often prevent us from obtaining it, & thirdly the quantity of Camphor is too great; I would advise it to be prepared exactly in the above manner with the exception of leaving out the oil of aniseed altogether & using only one dram of Camphor.

In Nephritis you will often be compelled to exhibit Opium to relieve the violent pain, & I am happy to inform you that I have never seen it do mischief. Some cases of Ischuria evidently depend on a Spasm of the neck of bladder, hence Opium is one of the best remedies - Mr. Pitt says he seldom

Found it necessary to tap the bladder after using opium. In Dysmenorrhoea opium & Camphor are good remedies; they have been much employed in Rheumatism both acute & chronic, of its use in acute Rheumatism I have spoken before when treating of heart. — The pains of chronic Rheumatism is more effectually relieved by opium than any other medicine —

January 22th

Acute Rheumatism often requires something else than the lancet to cure it especially when it assumes an intermittent form, this as I have before said is very successfully treated by bark — But it is only to be given during the apyrexia after the phlogistic diathesis has been subdued by bleeding, we should always endeavour to excite a sweat & for this purpose nothing is so effectual as opium in the form of Dover's powder —

Dover's powder is thus prepared Take of opium and Opicac. of each 1 drachm Sulphate of Potash one ounce, triturate them well together, the salt is added only to obtain an intimate division the opium & Opicac. it adds nothing ^{to} the nature of the compound Ten grs. of this powder contains one of opium & one of Opicac. Dover's powder as above prepared often disagrees with the Stomach, owing entirely to

The Sulphate of potash, I have often used Gum arabic or loaf sugar instead of Potash, & find it to answer very well - I am, fine. Six or 8 grs of Niter is said to enhance the virtues of this compound, this medicine does not preserve its virtues any length of time, hence it is better to prepare it when wanted if you wish it to act promptly - Dr. Cullen usually exhibits this medicine to his Patients with Rheumatism in the morning, & had them well wrapped up in flannel & blankets in order to favour a diaphoresis; I believe this to be an excellent practice, but I have been generally in the habit of giving it in the morning, & very seldom give dovers powder without requiring the propriety of warm clothing it will be taken more conveniently in a bolus as it is ready to be thrown up by vomiting no drink is to be given the Patient after the exhibition of this medicine untill a sweat breaks out - By not observing this caution it will, ^{be} frequently thrown up, after the Patient has begun to sweat; weak sage or hohe tea may be given in small quantities Sometimes the Wasser Soup of the Germans is to be preferred to all other drinks - It is prepared by boiling water poured on the crusts of bread, with the addition of a little salt or butter; when the diaphoresis does not extend to the feet, take bottles of warm

Water or heated bricks may be applied to them & an additional covering. If the Patient feels hot & restless, the clothes may be removed partially. But if he bears the sweat well, it is better to continue it for 10 or 12 hours, if he feels very weak a little chicken water or Peppermint tea may be given or if the power is entirely gone off, a little weak wine whey may be proper after sweating the Patient should carefully avoid exposure to cold. Some eminent Physicians strongly object to giving opium or Dover's powder in acute Rheumatism. Dr. Sydenham ventured to give it before the fifth day, he says it fixes the disease. I think Dr. Sydenham was too much attached to critical days. I do not say that opium is to be given before the 3 or 4 day, but I would object to it on that account only; I should be guided by the pulse entirely. I believe opium is hurtful in all inflammatory diseases where it does not sweat, all authors agree that opium increases the pain of Rheumatism at first, but that it ceases upon the breaking out of sweat. Upon the whole I think it a good rule to lay aside opium when it fails to sweat, which is the only indication in giving it in inflammatory diseases. Dr. Brookley asserts, & I cannot but consent to his opinion that Opium diminishes the Narcotic & stimulating powers of opium.

It is certainly one of the best emetics where opium is taken with a view to destroy life. Three gr^{ss} of opium united with Spicac^{ea} will not have as much effect as two gr^{ss} given alone. Mr. Ware has used opium in a liquid form in some cases of acute ophthalmia with great relief to his patient. It generally occasioned a good deal of pain, & a burning sensation when dropped into the eye - but this was very transient, & the patient very soon found relief. Medical practitioners generally agree that opium is hurtful in regular Gout. Dr. Brown had a very erroneous idea of Gout, when he asserted that it was always the offspring of Indirect acridity, & that it could always be relieved by Stimulating remedies as opium. Brandy &c. much has been said of exercise & labour, in preventing & curing Gout, but I can assert from much experience that they will not prevent Gout, especially when we acquire it from hereditary predisposition. Thirkland was so much in favour of exercise & labour as a preventative of Gout, that he once travelled a considerable distance to see a case, which contradicted his opinion. The man who was affected was told lived on a spare diet, & had been a hard labourer for many years, yet notwithstanding this he was cruelly tormented with gout. Thirkland asked whether his ancestors were not affected with the Gout;

The man with emotion replied, that he was a son of a Nobleman, whose family had long been affected with this terrible disorder. Hence Gentleman gave observe that labour will not prevent this disease. I have seen many cases similar to the above. Gout is truly an inflammatory disease, it is often preceded by pleuritis, what is called a retrocedent Gout is known by a nausea & sometimes vomiting a sensation of extreme cold in the Stomach & a preternatural action of the arterial system. In this state opium is an invaluable remedy it must be given liberally & repeated often & after the affection of the Stomach begins to decline, then the medicine may be gradually diminished. In the arthritic colic opium is one of the best of remedies, I have given as high as 600 drops in 24 hours when other Stimulents are used as either brandy Ginger &c. The quantity of opium may be diminished, but with respect to the two first my motto is *caveendum*—

Ginger boiled in milk is used by some practitioners. but I prefer giving it in warm water, I have myself taken as much as ^{1 ounce in} 12 or 14 success of hours without any ill consequence. With respect to ginger it may be given with opium, & the dose may be diminished. This practice was followed by Sir Joseph Banks—

The sick head ache which is so common among our females appears to be a gastric affection in many instances. It is a most distressing disease, often terminating by a helious vomiting and haemorrhage, opium given in a dish of coffee will relieve this affection better than any other medicine. Of the use of Opium in hemorrhages I shall say but little, they are divided into active & passive, as I have before mentioned. In the first of these, we should conclude from analogy, that opium would be hurtful, but in the terrible Hemorrhages which has been induced by great distress or by fear, opium acts as a powerful astringent stops the discharge very effectually especially if we combine with it a small portion of alum. Helmont acquired great reputation by his success in curing uterine hemorrhages. It does most good when it excites sweating. I believe that opium might be given with great safety in the Hemorrhages of Pregnant women, which always threatens abortion. I have never had sufficient trials to determine its efficacy. The bleeding of Hemorrhoidal piles is generally of the active kind, & it certainly does mischief by favouring plethora & a costive state of the bowels. Opium may be employed externally in the manner recommended by Dr. Helmont. Epistaxis is always an active hemorrhage & is not a case to which opium is well suited. Hemoptoe is not always dependent a phlogistic

(1835)

Diathesis & requires the lancet cool air blisters &c -
But it is impossible to manage some cases without
Opium; I have commonly prescribed the brown
mixture formerly mentioned, & seemingly with
less harm than any other preparation of opium -
But I must acknowledge with Dr. Keen that the
exhibition of opium in hemorrhages is a matter
of great nicety, it is often only a palliative
remedy - these hemorrhages after being restrained
for a time frequently return -

January 24th - - -

The propriety of giving opium in Pthisis Pulmonalis
has been disputed by some very able practitioners
altho, it requires much nicety, yet it is almost
impossible to manage the cough without opium
in some form or other, for this purpose the brown
mixture is one of the most safe & agreeable preparations
altho' at the same time it is less Stimulating -
Opium does not appear to be well suited to measles
the disease being generally accompanied with a
phlogistic diathesis - Dr. Sydenham used opium
very freely in measles. The cough would seem to
require the lancet, but in many cases it gives
no relief - I have ventured to give the brown

Mixture I succeeded very well with it, where the common preparations did harm. The horserings which succeeds measles, sometimes require opium but in general I have found the Colatil Alkali to answer better. I have often succeeded with Lard combined with a decoction of bark, I need not say that when Varicella comes on in measles opium is to be used. Of the use of opium in small pox I shall say but little at this time; at the time the eruption ought to make its appearance, the Patient is sometimes so debilitated that the progress of the disease is interrupted, owing to a want of action. Stimulents of some kind are always proper at this time, & nothing appears to answer better than opium. It is also indicated when the eruption goes on too slow. Opium appears to be an indispensable article in the management of Dysentery many practitioners condemn all the preparations opium in Dysentery, but I believe they do it more from prejudice & theory than any thing else. Dr. Cullen thinks that opium is very hurtful in Dysentery, but the Drs. practice in this disease was very inconsiderable. Dr. Ferriarola appears to have been too sparing in the use of opium in this disease. If it were given in the beginning it would be an important remedy. Dr. Helverston gave them in the form of a Glyster after sufficient evacuation had been made. Sydenham began the cure of Dysentery,

By gentle purges, & afterwards giving from 20 to 30 drops of laudanum every morning & evening untill the cure was completed. Banters was successful in treating of warm climates, his chief remedy was the extract of sassafras & Opium; In my own practice I have never found any injury from the use of opiates in this disease — I know that some Physicians lay a good deal of stress on its astringent qualities, & hence they say whatever induces costiveness does harm, but the astringency of Opium is much less considerable than has been commonly supposed, & you have seen that large doses of Opium often purge as the case of Cataplexy forcibly manifests, & I am of the opinion that its stimulating effects are more to be dreaded than its astringency. — In some cases of Dysentery Opium may be given with ~~security~~^{safety}, particularly when it is preceded by simple irritation — an eminent Physician in Göttingen used Opium with the greatest success in Dysentery which prevailed epidemically at that place, he never found it to produce costiveness — I have employed Opium in a very particular form with Ipecac. both in acute & chronic Dysentery with great advantage — Dover's powder appears to be very well suited to many cases of Dysentery Opium is universally employed in Dysentery either in combination with some cretaceous pulv. or kino & allum, I have known it purge in this disease, particularly if there was any fever in the intestines —

In Colera Opium is an universal remedy, before prescribing it, many Physicians, wash out the alimentary canal by demulcent medicines; this will often be proper but in many cases it will be necessary to give opium immediately; the Patient being too low to delay— In the management of most cases of Colera opium is to be used very liberal to the extent of 6 or 8 grs in the 24 hours in an adult— Opium appears to be well suited to some cases of Dyspepsia & particularly in those cases which succeed Inter. fevers, & some times to those brought on by cold; it appears to act almost entirely by its power of inducing diaphoresis—

From analogy we should suppose that opium would be good remedy in Diatetis— Of the use of opium in tetanus I can say very little from my own experience— Some Physicians are of the ~~opinion~~ opinion that it is a most powerful remedy, while other have found it of no service— There has been many cases of cures recorded by eminent person, whose veracity we cannot doubt— In general where opium has done good it has been given in very large doses— An anonymous writer in a work entitled "Practical remarks" records a cure of tetanus in which the Patient took 20 ounces of Laud. in 24 hours, without either inducing sleep or abating the spasm— This is certainly an enormous quantity— I think

It may be a Typhographical error; Dr. Gtaster relates the case of a Negro man affected with tetanus who took 1500 grs of solid opium in 17 days. The case is so well attested it cannot be doubted. Dr. Rush thinks that opium is much less useful in tetanus than bark & wine. Dr. Rawley & Mosley have found opium of little service in tetanus. It is to be observed that those Physicians who succeeded with opium gave it in large quantities, & those who failed gave in too small quantities. The use of wine & bark in this disease & the great analogy between them & opium seems to favour the good effects of the latter in this disease. I once tried the effect of Ather in a well marked case of tetanus, it done no good, eventually my Patient died. I have in one instance succeeded by slightly affecting the gums with mercury. Opium applied externally has been found very useful. Mr. Hunter of the East Indies has relieved violent Spasms by applying it externally. Hydrophobia is in some respects allied to tetanus, I doubt whether the genuine disease has ever been cured, it still continues to be one the opprobrium Medicinae, I believe that opium Hydrophobia at its commencement is always a violent Atheric disease, this I infer both from the Symptoms & the causes which produce it. It has been induced by the bite of a rattlesnake & other venomous Animals, also by Camphor Stomach rem

Which are all known to be powerful Stimulents Dr. Bare have recommended bloodletting in this disease to a great extent—whether it has ever succeeded alone I am unable to tell—As soon as you can see the first Symptoms of Hydrophobia you must bleed very copiously. Nuxgent found opium of some service in this terrible disease he says at least if it did not lessen the spasms, the Patient had less aversion to fluids. The very generally used much in combination with opium. I have sometimes found injections of tobacco to a good effect the aversion to water was much considerable if Opium ever does good in this disease, it must be given in very large doses—Dr. Rush has found Hydrophobia a Symptom of Hysteria, I have observed one case of this kind my self in a lady of this city; I would scarcely persuade my self, that she had not been bitten by a mad animal, but the family soon convinced me that this was a frequent Symptom, whenever she had Hysteria, this was farther proven by its being readily & promptly cured by a small dose of assafoetida. Dr. Tissot & Haller were once called to see a violent case of tetanus, which resisted all their remedies, at length it was proposed to cause the Patient to be bitten by two Vipers which was accordingly done, & the man became perfectly easy & soon recovered—

Chorea St. Viti—This disease generally demands the tonic plan of cure, I have seldom known Opium

of much service, With respect to the use of opium in Epilepsy authors differ very much. The disease appears to require a variety in the treatment, as it arises from various causes. Some authors affirm that epilepsy is sometimes brought on by large hemorrhages, I think this is a very rare circumstance, If debility alone would induce this disease, we should often see it in Typhus fever & in the decline of life which is not the case. Epilepsy is most always induced by a plethora, & Opium by paralyzing by the accumulation of blood in the head generally does mischief, but when Epilepsy arises from irritation of the nervous system Opium may sometimes be useful, especially when we can by any symptoms foresee the accession of the disease. Epilepsy when induced by fever is often cured by opium. A lady who was attacked with this disease in consequence of a great alarm from the bon burning of the German church in South Street was very soon cured by opium.

January 25th - - -

Epilepsy very often attacked some persons during sleep & at no other time, I am inclined it to a horizontal position & the heat of the bed clothes, in general the paroxysms may be stopped by making the person. I have seen it prevented by causing the patient to sit up. Hysteria is most generally

Connected with or dependant on a plethoric state of the System, hence opium is highly detrimental, but there are cases of histeria brought on suddenly & not depending on plethoro, where opium is an invaluable, when the histeria depends on passion of the mind opium may be generally given with advantage—

Palpitation of the heart sometimes depends on an organic affection, when this is the case no remedy will ever be of any service, but it is often a symptom of other diseases, it is very often produced by a spasmodic affection of the viscera, & such as frequently occurs in other muscles. In this case opium will generally succeed.

Asthma, is very often attended with a turgescence of blood in the vessels of the lungs—For this case the proper remedies are bleeding, leisters, pure air & exercise &c—but in the spasmodic & catarrhal asthma opium is a very good remedy, asthma is often an artifice affection it is to be treated as gout.

Pertussis at its commencement is most always attended with considerable fever. When speaking of hoars. I mentioned the ill consequences of giving stimulents in this stage of the disease. Opium cannot be given with safety untill the inflammatory symptoms have subsided, & then the lichen mixture is a most valuable medicine. I have sometimes alternated this medicine with white Colic & with great success—

Ptyosis This is a frequent disease in Scotland & in the northern countries Sweden &c. It is more frequently beyond the Alagany Mountains

Then on this side. I have generally thought it a
 symptom of Dyspepsia. Dr Cullen speaking of Gyrosis
 says nothing retitater relieved the paroxysms as well
 as opium, but it is only a palliative, & will not
 prevent the returns of the paroxysms - Cullen
 informs us, that it is a frequent disease among the
 lower class in Ireland & opium is found a very useful
 remedy - The best remedy in this disease is here &
 particularly the white oxide of Bismuth, this is said
 to be as much a specific in Gyrosis as mercury in
Syphilis. - The Cholic is produced from a variety of
 causes of course the remedies must be very different -
 When from the pulse & other symptoms we have
 reason to believe there is any inflammation of the
 bowels bleeding &c. will be necessary - If the symptoms
 are very frequent and they come on suddenly it will be proper
 to give a small portion of Opium in the Hysteria Colic -
 Opium without previous evacuations will be found useful
 in the belious Colic Opium will be found useful after evacuation
 Dr Cullen generally gave Opium first and purges afterwards
 In Colica Pictonum Opium is said to have induced a cure
 without the aid of any other medicine. It is remarkable
 that in this disease Opium must always prove laxative -
 In encarcerated Hernia Opium is said by the celebrated
 Richter to have relaxed the stricture in a very short time
 and the detained portion of Intestine was easily reduced -
 I believe that Copious bloodletting will answer much better
 In mania Opium has been very generally employed Wepfer
 relates a case of mania that was cured by giving 15 grains
 at a dose I have given 16grs to a young lady affected with
 mania from disappointed love she fell into a sound
 sleep which lasted a considerable length of time she awoke
 with her mind perfectly composed an Erysipalaceous Eruption
 appeared on her neck also a slight tremor of the limbs
 lasted for a short time but they soon went off and she has
 ever since been perfectly well if a second case should
 occur I would not be afraid to imitate this bold -
 practice Dr Young gave six grains of Opium to a young

Man with melancholia which threw him into a profound sleep. The next morning he was put into a cold bath without my orders but in 8 days he perfectly recovered whether the recovery was to be attributed to the Opium or both is difficult to determine. Dr Cullen says that in many Cases of mania Opium is Capable of doing much good but in many Others it is manifestly Injurious particularly when depending on an Organic affection of the brain perhaps says the Dr my failure may be attributed to my unwillingness to imitate this ~~bold~~ ^{bold} practice of some Physicians in giving in very large doses upon the whole I think Opium a very precarious remedy in treating Mania. In puerperal mania Opium may be given with great safety and advantage. It is even said to be specified in this disease. In mania Induced by intemperance in the use of ardent Spirits Opium appears better adapted than to Any other form of the disease. In treating this disease I usually give a large dose of Laudanum and diminish the dose very gradually. Sometimes I add a little of the tincture of Capsicum made by infusing 10g of Caps 70g of Spirit. In some Cases of Gangrene Opium is an excellent remedy the particular Cases related by Mr. Poll when the Gangrene first attacked the toes would yield to nothing so well as Opium. In ulcers of a bad kind where the powers of the system are much exhausted Opium has been found to answer better than Any other medicine in St. Bartholomew's

Hospital. Opium as a remedy for cancer does not appear to be entitled to much notice. Mr. Simmons says however when the smallest quantity of Opium was used in union with arsenic, the cancer universally grew worse. I attended a case of scirrhus of the rectum in consultation with Dr. Whistler. Laud. was proposed to be injected per anum, which was accordingly done but the Patient afterwards evidently grew worse. Some of the best writers have objected to the use of Opium in cancers. Dr. Young says the relief given to his Patients was very transient, & the sickness of Stomach was always increased.

This Patients generally died sooner under the use of opium than any other medicine; It is remarkable that hemlock which is also a narcotic; affords relief when injected into the rectum, when opium generally do harm.

Opium was introduced as a remedy for Syphilis in the 1449 It was employed in the British Hospital in York but we have no authentic cases of its ever doing any good, I never saw it of the least service in the St. George's Hospital & I believe that it is now generally laid aside as a remedy of its self. Opium altho' it has done no good in Syphilis of its self, yet when combined with Calomel it answers several important indications, it prevents the mercury from running off by the bowels; its powers of retracting Salivation is well known, & probably the mercury has time to overcome the Venereal Virus, before it has time to produce a copious & disagreeable Salivation. Mr. Taux a French Physician thinks that opium will recall syphilis after mercury has subdued the poison, but for this opinion I think there is no foundation. Suedner recommends opium to be triturated with mercurial ointment & applied to exostoses he has by these means effected a cure mercurial ointment alone would not succeed. Opium has been very generally employed in the troublesome disease Gonorrhoea; the painful erection of the penis or bardeen is more effectually removed by large & repeated doses of laudanum than by any other medicine. Small doses even do harm.

Ever since I have taught lectures in this university i.e. ever since the year 1794-7 I have always been an advocate for opium in checking a salivation, from repeated experiments I can affirm that it will succeed better than any other medicine.

A Salivation that would continue for 12 or 15 days under the use of sulphur & other medicines, will be stopped in one fourth of the time under the use of opium, I generally give from 1 to 3 grs. every night & use a gargle of Laud-
 & molasses in ^{lukewarm} water. I have Gentlemen insisted what I have to say on opium, you will no doubt conclude, that I have dwelt on it too long. But I deem the inquiry a very important one; I cannot believe that our time could have been better employed. I consider opium as a disimum medi-
cinum & to conclude if I were to write a book on this subject, I would have the motto of old Boyer - opium in the hands of a young practitioner is like putting a sword in the hands of a maniac -

January 26th

In the second class of narcotics viz. in the class Scurida I shall place Hyoscyamus Niger or black henbane an article little employed in the United States but more in Europe, this is not a native of the United States; but like many other plants has been introduced into this country, I have seen it growing in Jefferson County in Virginia.

And in many other places. Black Senbane is undoubtedly a narcotic & considerably stimulating medicine whether it is more so than opium I am unable to determine. A Person by accident having swallowed two drachms of it & ^{was} soon affected with a violent colic, pains & stupor of the head, dilated pupils & other symptoms of delirium, he was however soon cured by an emetic. Nine other persons having eat some of the green plant by mistake, were seized with delirium, risus sardonius & a remarkable affection of the eyes. A Servant swallowed some of the crude root, & was suddenly seized with dimness of sight, increased heat of his body. Gangrenous vesicles appeared on his body & a mania which lasted several days. I have myself been delirious &c. merely from exposure some hours to the effluvia of Senbane, while I was experimenting on the extract. I incautiously left all the articles in my bed room, during the night, I was attacked with frightful dreams, confusion of head, & great perturbation of mind. Dr. Boerhaave was made giddy merely by preparing some of the extract of Senbane. From all these effects you perceive there is great analogy between this article & opium except in a very few cases. Opium generally proves to be costive while Senbane proves to be a laxative, but this is not always the case and it would appear that opium proves laxative

About as often as Senbaine proves astringent. Senbaine
 is often a powerful diuretic, when it distracts life, the
 vessels of the brain are unusually turgid with blood and
 the stomach not unfrequently gangrenous. It operates
 on the brain much more powerfully than opium. Dr. Stark
 has called the attention of the people to this medicine
 after making a number of experiments on dogs & him-
 self ventured to give it in several cases of Mania
Melancholy Epilepsy & Hemoptisis, he began by
 giving one grⁿ of the extract three times a day and
 gradually increasing it to 20 grs in 24 hours. I have
 gone beyond this dose my self as you will see hereafter.
 Dr. Stark does not say that he was always success-
 ful in the diseases that I have mentioned, on the
 contrary he often fails; I have seldom seen disagreeable
 consequences arise from taking this medicine when
 proper care has been taken. It is as safe as opium
 and will be found a valuable medicine; It agrees
 with many persons who cannot take opium -
 And has answered all the important indications
 for which the latter is commonly prescribed.
 Dr. Donato Monro relates the case of a lady affected
 with Phthisis who took 6 grⁿ of the extract of Senbaine
 at once, and without inducing any disagreeable
 consequences. Greding exhibits this medicine in
 many cases of Epilepsy mania & Melancholia he
 says the general effect was a copious sweat placed
 & profound sleep. But in some instances Vertigo

Tarper eruptions on the skin herborigme and
 smelted glands were the consequence, it was remarkable
 that in one case, the catamenia returned after being
 absent for a considerable length of time & in two
 cases, produced salivation - Greeding concluded
 that this medicine is only a palliative, it never
 effected a cure & on the whole is a dangerous medicine -
 Professor Bergius has found it useful in mania
 & palpitation of the heart. Fothergill has cured
 puerperal mania with henbane in a very few weeks
 from what I have observed, I think the narcotic medicine
 are likely to do more good in this species of mania, than
 any thing we have yet tried. The extract of henbane
 has been much praised by Dr. Bree as a remedy for certain
 species of asthma, the following is the prescription
 used by this gentleman. Tincture of squills half an ounce
 extract of henbane & Nitric acid by weight each two drachms
 water four ounces mix; a table spoon full two or three
 times a day according to circumstances - Dr. Bree has
 found more advantage from this than from any
 other medicine, he says it must not be taken too
 long, or in too large quantities, otherwise it is
 apt to disagree with the Stomach - Wepfer
 exhibited this medicine in Pertussis in com-
 bination with antimony, he gave a child
 from one to two grs of the extract in 24 hours
 which I think too large a dose, I would not
 give it to a child of mine, Henbane has also
 been recommended in the painful ^{erection} called cordis

after bleeding topical & general it has had very good
 Mr. Bell speaks very highly of this medicine, he gave it
 to the extent of 47 or 48 grs. without inconvenience
 but this was only after it had been exhibited for
 a considerable length of time — In one case of mania
 which I cured at the P. Hospital, the Patient 35 grs.
 the extract without inconvenience, he took four grs.
 but this was an over dose giddiness & delirium
 was the consequence, which was not produced
 by a few grs less — Henbane ought to be preserved
 in vessels well stoppered, it is directed to be fresh
 made every year, but when it has been well
 prepared & kept from the air, I have preserved it
 for 7 years perfectly free from moldiness & retaining
 all its virtues —

Natura Stramonium is very common in every
 part of our country, it is called indifferently Henbane
James town weed, stink weed or French blesnet —
 This article has a very disagreeable smell Goats & sheep
 eat it with impunity, but in huge enebriation very
 often follows after using it. Birds distribute this weed
 to all parts of the country by swallowing the seeds and
 carrying them to some distance & there discharging
 them unaltered — In Mr. Beveridge's history of Virginia
 you will find something very curious & useful respect-
 ing this article — The extract & other preparations
 of Stramonium, have been considered as Sedatives

But we have many convincing proofs of its being a powerful Stimulant Botte Thempier & Cooper & Molineux tells us that the turks are very very generally in the habit of using Stramonium to exhilarate their Spirits, when opium cannot be had without a high price. Stramonium like henbane produces a copious sweat, sometimes convulsions & not unfrequently Hemorrhages of red blood. Mr Cooper made several experiments with Stramonium in order to ascertain its effects on the pulse, the general result was, that the force & frequency of the pulse was very much increased & a very considerable tension; on the whole the effects were very similar to opium. During the time the British Soldiers were stationed in New Jersey a parcel of Stramonium was called for some quarters & eat, some were made quite delirious, & ran about quite mad, in one tetanus was produced & in another convulsed. Hydrophobia Dr Latham relates the case of two children who were affected with Hydrophobia by the use of this medicine, the constriction of the fauces were very great; every time water was offered to them. Dr Denit has published a case exactly similar, in the New York Medical Repository. Bergius has found the extract of henbane to succeed very well in the mania of puerperal women. The cure was generally accelerated by a seaton in the neck —

Dr. Becker of Maryland has used Stramonium to great extent in Epilepsy in many cases he was very successful but in others the medicine had no effect whatever; particularly in those cases where the disease had existed so long as to make those affected foolish. He says the medicine must be taken constantly during the intermission or else no advantage is derived from its use. The recommended dose is a scruple of the powdered seed, & ten grains of flower to be made into ten pills, two or three of which are to be taken every day untill a short time before the expected paroxysm, when they are to be discontinued. He is inclined to believe Stramonium is as much a substitute to the name of a specific in certain cases of Epilepsy as bark is in an intermittent fever.

January 29th

I have had a good deal of experience of the use of Stramonium - probably more than any other Physician of this City, I don't believe with Dr. Becker, that it deserves the name of a specific, yet I can confidently assert that I have seen more good from Stramonium, in certain cases of Mania and Epilepsy than from any other medicine whatever. The case of Lewis Shiner related by Mr. Cooper is a very interesting one, he took Stramonium for a considerable length of time but without being much relieved. I suspected the dose was too inconsiderable

The same Patient afterwards came into the P. Hospital I prescribed Stramonium for him without knowing he had taken any before, he commenced with 1 grs. twice or thrice a day, increasing the dose every day until he took 26 grs in 24 hours; in a short time the fits became less frequent & in one month he was discharged perfectly cured. I once gave the Stramonium in a case of Epilepsy where fatuity had taken place; the Patient was evidently made worse, than when he was when he began to take the medicine. The case of Betty McCarney with Epilepsy who was cured of a violent disease in a few weeks by the use of Stramonium; ^{this} demands your particular attention her case you will find related in the books of the Hospital. A Black man belong to my Brother was cured of a well marked Epilepsy by the use of Stramonium. When speaking of the use of Opium I mentioned the case of Epilepsy to which that medicine was adapted nearly the same observation will apply to Stramonium all cases of Epilepsy attended with a plethoric state of the system, and a turgescence of blood in the brain are never much benighted by the use of Stramonium and often they sustain much injury. In certain cases of mania I have succeeded better with Stramonium than with any other medicine. Mary Hill aged 35 years of age was admitted into the Hospital in the summer of 1800 for a mania with which she had been affected near three years. I ordered her to take two grs of the extract of Stramonium every night;

The dose was gradually increased till October 18th when she took 35 grs. every day; only two months from the time she first began to take the medicine; she was cured of her mania, but she had large abscesses on many parts of her body, fortunately these were of short duration, for in November she was discharged perfectly cured. In another case of mania I gave 32 grs of the extract of which produced a remarkable dilatation of the pupils & a paralysis of the upper eye lids; but these symptoms was speedily removed by the application of a blister to the back of the temples; my Patient finally recovered. An old man from New Jersey came into the Hospital with mania in the year 1804, he had long been affected with fatuity of mind, however by the use of Stramonium in a very short time he was nearly recovered. Altho, his mind was entirely composed when he left the Hospital. Stramonium promises to be one of the best medicines in those cases of mania brought on by frequent intoxication. Some of the late foreign journals mention the efficacy of Stramonium in certain cases of Hydrophobia asthma of this I have no experience. A Physician of this city proposes to cure Hydrophobia by giving 2 or 3 grs. of this extract daily. The Gentleman is not a practitioner & probably never saw a case of Hydrophobia, or else he never would think of curing such a terrible disease with such insignificant doses of this medicine. I don't object to the use of this medicine in this disease, but if it is to do any good at all, it must be given in very large doses.

Dr. Chambers recommends the bruised leaves of Stramonium to be applied to the feet of Gaiting people—

I have considerable respect for the talents of this gentleman but I think he has recommended an application which must have a very injurious tendency. And here let me caution you against all kinds of Stimulating applications to the feet in Gouty People. They invariably do mischief by translating the Gout to vital parts & thus a great deal of mischief will ensue. An ointment made by boiling the leaves of Stramonium in hog's lard is a very common domestic remedy in cutaneous diseases. ~~has~~ this ointment done a great deal of mischief.

M^{rs} Bethune was attacked with an arthritic colic some years ago. Dr. Physick & my self were called to see the case; we both agreed that it was an arthritic affection, accordingly remedies were given to remove it. But soon after she was attacked with a violent cutaneous affection. We requested that she should do nothing to repel it; but being very much tormented with a violent itching, she rubbed some of the Stramonium ointment on her skin. The itching was removed; but the following night she was again attacked with the colic which she died. The Extract of Stramonium is thus prepared. Take some of the adult leaves of the plant in July or August wrap them in a flannel cloth bruise them well, & then press the juice into an earthen or plaster vessel, tightly set the vessel in a

Room previously warmed by the rays of the sun; after the juice is sufficiently concrete preserve it in a vessel well stoppered -

The dose of this extract is one gr. two or three times a day, which may be gradually increased to 20-30 or 40 grs a day according to circumstances. I seldom give less than a gr. even to a child, when we give this medicine in large doses, we shall often be compelled to reduce it a little & give it in smaller doses, but by gradually increasing we may go beyond the dose, which first produced unpleasant effects. The dilated pupils & distorted eyes will sometimes alarm the young practitioner, but remember these effects are only transient, & will easily be removed by the application of blisters all these Narcotic medicines which I have been treating of; effects the skin in a remarkable manner when given in large doses. When the seed of *Stramonium* have been swallowed by children; the stomach will often require 3 grs of Tartar Emetic to excite vomiting. Dr. - of Virginia mentions a singular fact to me some time ago - Turkey he observed were often intoxicated by swallowing the seeds of *Stramonium*, he has seen their craves, evacuated the contents and by that means saved their lives. Datura Ferox This species of *Stramonium* is a native of India Mr. Juss gives us a singular account of this medicine - If the natives possess any secret poison it is certain to contain some of this article. It is given for some of the most vile purposes, women often give it to their husbands & commit adultery immediately before their eyes. It enters into the composition of snuff which will produce

Vertigo & insensibility Mr Ines says it is not common to see decent looking Frenchman sitting in company with his box in his hands & dealing out plentifully to all his companions, & when they are completely intoxicated, to slip his hands into their pockets, & run off with their purses. Different species of Solanum or night shade have acquired considerable reputation in many diseases —

Solanum Dulcamara or bitter sweet, this has been given in certain cases of Rheumatism. The French Physicians are particularly attached ^{to} this remedy. Bitcher has given this medicine in certain cases of Leprosy with an evident good effect, he macerated the skin with a decoction of the bitter sweet at the same time, he gave this medicine internally he has known it to salivate —

Nicotiana Tobacco This has been diffused all over the United States, the Indians regard it as a sacred vegetable. In the latter of the 16 century Thomas Harroth gave a very singular & ludicrous account of the estimation in which tobacco was held among the Indians, he tells us that when they were caught in a trap, the betobacco was thrown into the water, and up into the air thinking thereby to appease the stream. Dr May in his inaugural dissertation, recommends the trial of tobacco in some cases of Tetanus, he relates several cases in

Which this article was effectual, & other where it done no good
 one or two of them I shall relate. A little Girl ran a nail
 into her foot just between the flexor tendons of the great toe
 the wound readily healed, but 12 days afterwards she was
 seized with a stiffness of her lower jaw, in a short time
 head & neck was bent backwards on the shoulders, Opium
 was now given which seemed to give a temporary
 relief, but it soon ceased to have effect. In some cases days
 after her face exhibited the most horrid aspect, her back
 was very much recruited, the warm bath was now
 had recourse to, which afforded a temporary abatement
 of the Spasms, but it was also of short duration. She
 had evacuated neither urine nor feces all this time
 Dr. Warner advised the use of tobacco injections, which
 were accordingly given, for a few moments the Spasms
 to increase, but in a very short time they abated—
 Gradually went off & returned no more— a black
 man so attacked with tetanus, in consequence of
 liquid caustic being applied to his various teeth
 on the fourth day says Dr. May when I saw him, he was
 in extreme agony, with his head, neck & back recruit-
 ed to shocking degree I administered tobacco by tasters
 but without any effect whatever the man grew
 worse & died—

January 3rd

Injections of strong decoction of tobacco have been
 used in certain cases of Hydrophobia. I saw a case of
 this kind in Phila. where almost every thing had
 been used to no purpose, the serum which ran down
 from the Patients blister excited the most
 violent convulsions altho, the patient scarcely
 knew what we were doing, injections of tobacco
 were used in this case with most evident advantage
 the only drink which the patient could swallow
 was after an injection had been thrown up the
 rectum, but the person finally died. Probably the
 disease was too far advanced, before the tobacco
 clysters were tried. Injections of this article have been
 warmly recommended in Incarcerated Hernia -
 I can say but little of this from my own experience
 we should never use more than one scruple or
 half a drachm of tobacco in an enema, more than
 this will produce great sickness & vomiting.
 The smoke of tobacco has been warmly recom-
 mended for the recovery of persons apparently stricken
 whether it has been of service I cannot determi-
 ne, but before we conclude, that it is certainly
 useful, we ought to make a great many experi-
 ments - Injections in which mustard is contained
 have also been recommended for this purpose -

I should be very unwilling to employ them. A decoction of tobacco has been recommended as a wash in various cutaneous diseases as the Lepros Herpes certain cases of Lepros. I have myself known it of essential service in this last disease. In the James river ring worm it is of great use. When the skin has been eradicated, the infusion of tobacco should never be employed. I have seen dreadful effects, from using it in Tinea Capitis. Professor Bergius has found a fomentation with the leaves of tobacco to be very useful in many cases of Phymosis. I cannot say as much in favour of this application, I have imitated this practice but without success. I refer you to Dr Cullen's Materia Medica for some excellent observations on the injurious effects of Tobacco.

Under the heads of Narcotics, but not in the class of Livida I shall place Digitalis. This is truly a narcotic medicine & a most powerful one. Incitant or Stimulant; it is even more stimulating than Opium. This I infer from its capacity of inducing a high fever, succeeded by a perspiration more or less considerable: there are not wanting instances of its inducing gangrene of the stomach. In certain cases of mania its operation as a narcotic cannot be denied, I shall defer the particular consideration of this article until we come to speak of the Dracetics.

Balladonna - This is one of the most powerful of all the narcotics; I have never seen this article in country, of course I have never used it; every part of this plant possesses a narcotic power, but the roots & leaves; have it in a more eminent degree - Many bad effects have resulted from the leaves being eaten by children - There are many cases related of the efficacy of this medicine in Cancer - There is no doubt but that it may be used with as much safety as opium.

Cicuta Conium Maculatum - of Senecio.
You must not confound this plant with one which has also the name of Hemlock, this latter grows in meadows & other moist places, & is a very different article - Conium maculatum Senecio is almost always found in dry places around barns & other out houses I think plant is not a native of the United States. At the it is now very common almost everywhere when Dr. Withering went to Birmingham, he found several Physicians experimenting on what is called Lamb Paraly instead of the conium maculatum. This plant may always be known by attending to these particulars 1.st it grows in dry ground, 2^d. it has a very peculiar smell & 3^d. when the age of the plant is a little advanced, it may certainly be known by the brown colour spots, but when they

Are raised in hot houses, either do not appear at all or are very imperfect. The cicuta appears to be a poison to all animals except the Goat. Dogs have been known to run mad after eating it. The expressed juice of this plant very generally contains crystals of Nitrate of Potash. Dr. Cullen placed this article along with opium in his class of sedatives. Dr. Darwin placed it among the incubantia but he has doubted the propriety of arrangement. It is unquestionable a Stimulant, but is weaker than Opium Stramonium & far less powerful than Belladonna. The following are its effects in an overdose - Cardialgia Vomiting Singultus Vertigo Convulsions & madness, a copious flow of serine lacte stools also a Salivation has been excited with it.

Dissection proves the Stomach to have been gangrenous in many places; I have myself seen a salivation follow its use. Mr. Benham was salivated merely by preparing some of the extract. Since Dr. Mark's publication on the use of cicuta in cancerous affection it has been very generally used in that disease. Recarter has used cicuta with success as an external application to open sores. Bergius says that in genuine cancer it is hurtful, but in Scrophulous ulcers resembling cancer, it is an excellent medicine. Mr. Adams has published a very interesting work on mortuæ poisons, it contains some of the best observation on cancer.

He says that altho' hemlock is an excellent medicine yet in many cases it is as important one & should not be overlooked in the treatment of cancers. I believe that it has on many occasions been serviceable & particularly in those cases attended with great irritation. The Hemlock bath which has often been prescribed in cancerous affection may be prepared by inclosing in a loose bag, half a pound of the leaves with a good full of the flowers boiling them in a quart of water for half an hour & then diluting it with a sufficient quantity of water, according to circumstances.

Cancer of the Rectum. has been much relieved by injections thrown up the rectum. In 1798 I attended a case of cancer in the rectum in consultation with Dr. Wister; we found nothing so effectual as pills of the extract & a decoction of the leaves in the form of an enema. It was remarkable in this case that Opium always increased the pain. Our medicine was only a palliative & the man finally died. Some years ago Dr. Mehn related the case of a gentleman who had a pimple on his face, without any evident cause, it soon became a Sherrus & at length cancerous, discharging a fetid brown sanious which stained his lining. Dr. M. prescribed 2 grs of the cicuta to be taken morning &

Evening, he took bark at the same time; the Patient evidently got better; but it happened that his hemlock was soon all gone & no more could be obtained; the Patient soon became worse altho he continued to take the bark, he finally - Mr. Gome recommends hemlock in ulcers of the leg, he has found it to relieve pain & diminish swelling; he generally uses it in the form of fomentation with the leaves. In 1795 Jno. Legman from South Carolina was admitted into the Hospital for Scrap I prescribed for him the extract of hemlock, it had a remarkable effect in diminishing the quantity of scales, but the disease proved fatal - In the fifth Vol. of the London Medical Enquirer Dr. Loder has published a case of Trichoderma, which returned periodically, he employed the hemlock, in this case with the greatest advantage - Dr. Wethering has found hemlock particularly useful in Chronic Rheumatism I have used it myself in this disease with evident advantage - Hemlock has been found useful in Gangrene of the toes in old People Ben Sweeten died of this complaint, but he was relieved by this medicine many times. Different preparations of Hemlock are in use, I think the extract a very ambiguous medicine, the dried leaves are far preferable. To prepare them let the leaves of the plant be gathered towards the end of June & from this to the middle of July, pick off the stems & little leaves & throw

Away, the remainder in a tin dripping pan placed in
 a stove room rub them to a powder, & preserve it in
 glass vial well closed & secured from the ~~sun~~ light
 from 1 to 3 grs of this powder, may be given two or
 three times a day, & increase it according to circum-
 =stances up to 15 grs or more if necessary. The powder of
 leaves of hemlock has been used in fever
 and in asthma by the late Dr. Pearson, he found
 it to mitigate cough heat & irritation - Dr. Butler
 has found this powder of use diffused in watery
 liquids in certain cases of Peritussis - I have never
 employed it, probably it acts in the same manner
 as all other narcotics. The extract of hemlock is a
 very doubtful preparation, sometimes being very
 strong & at other times being nearly inert -
 Dr. Cullen relates the case of a lady who was ~~affected~~
 advised to use the extract for a cancer in her breast
 she took the medicine until the dose was increased
 to a drachm three times a day at which time her parcel
 run out & she sent for more; Dr. C. mentions that
 she was particularly cautioned to diminish the
 dose on account of the great inequality in the
 preparations, she took 20 grs. but such was the
 violent effect that it nearly destroyed her life - coma
convulsions & delirium came on, also a sickness
 which came on & fortunately terminated in vomiting
 she fell into a deep sleep from which recovered slowly
 This case is sufficient to warn you against the great
 uncertainty & should make you very cautious in its use -
 no plant is more affected with light than hemlock -

February 1st.

The next articles we shall speak of are the Sub Narcotics. These are such as possess the narcotic power in an inferior degree. The first we shall speak of is the Prunus lauro cerasus of Linnaeus, this must not be confounded with the common laurel of the united States, they are both poisonous. But are indeed very different articles, they resemble each other in every respect; Dr. Cullen, says the Lauro cerasus is one of the most powerful sedatives that we possess. I have very little experience of the use of this article, but from what I can learn it is much entitled to the name of a Stimulant as any of the narcotics we have hitherto spoken of. The laurel has produced tetanus. This I think is a strong evidence of its Stimulating power. Dr. Cullen quotes Brauer's experiments to prove the sedative nature of this article, when in reality they prove directly the contrary, he expressly says, that in all the animals to whom the article was given there was a fever excited, & when it produced death inflammation in the Stomach was almost always observed. This Dr. Cullen takes no notice of whatever. Dr. Shipley & my pupil made a great many experiments on the laurel. He clearly proved that it was a powerful stimulant, & very nearly allied to Camphor. The laurel has not been much used in this country I think it has not been employed enough, it is a dreadful poison, & I am confident we shall find

It among the most poisonous, the best preservers of life. Dr. Brown Sanguis employed this medicine in the cure of agues - He directs as much of the powder as will lay on an english shilling & cautions us never to use it during the paroxysm; here again Dr. Cullen has departed a little from the truth in order to support a favourite Theory. Dr. Ferrius prescribed a single leaf of laurel to be made into a tea for a Hysteric lady & with great advantage. Dr. Oliver warmly recommends a tincture of the leaves in Gonorrhoea he directs 4 or 5 drops three times a day, he has found it to allay ardour & the pain of chordee - In a abscess of the lungs this tincture has been used with considerable advantage. The active nature of the laurel resides principally in its volatile parts, hence the distilled water contains a very active power an essential oil which it also yields; possesses nearly its virtues. The Europeans are much in the habit of mixing laurel with their custards. It gives them a very pleasant taste & has the power of exhilarating their Spirits - You must remember, that when Europeans speak of the delicious effect of laurel, they do not mean the common laurel of the U. S. States - - -

Cannphor: this an important article of Mat. Mexica there has been great disputes, whether this article be a Stimulant or sedative, I think there ought not to be the least doubt of its Stimulating qualities. Its effects in producing convulsions proves it - Feath

In the inferior animals, this clearly evinces it to be a highly stimulating. Yet nature notwithstanding these effects it must be acknowledged, that when it is given in small doses its stimulating effects are much less obvious, than any of the narcotics we have yet mentioned. Camphor is the produce of several trees, but the Laurus Camphorus is the one from which it is obtained in great quantities. Our common sassafras is a species of the same genus. oil of sassafras is nothing but a camphor.

The Laurus Camphora is a large tree growing in Japan, the extended arms of two men will sometimes not encompass it. It is also a native of the East-Indies & many other places. The natives in order to obtain the Camphor fall the trees & split the trunk & branches in small pieces, they generally find the Camphor in the interstices of the woody fibers which they carefully scrape off with Iron instruments. The first they obtain is the purest & is called head Camphor. The second is called the lilly camphor which they separate from the mass by a peculiar process, & the third which is the most impure, they obtain it from the branches they call it foot Camphor. The purest Camphor is of a chalky white colour & is easily reduced to powder, it gives a sensation to the tongue first of coldness & then heat, it agrees well with the Stomach, is given to allay nausea & is an excellent cordial. It is very little soluble in water, tho it is much more so than is commonly supposed.

Else how could it so strongly impregnate water with its peculiar smell - Camphor rubbed up with a little mucilage is easily suspended in water. The common Camphor of our shops is certainly impure. It has a bitter taste, & often disagrees with the stomach & produces nausea - Camphor is brought to us in large white masses of an unctuous feel & it gradually evaporates on exposure to the air -

Camphor is readily soluble in twice its weight of Spts. of wine, when water is added the Camphor is precipitated, this is owing to the greater affinity of the Spts. of wine for water - Camphor is soluble in the Sulph. & Nitric acids, with the last it forms a yellow liquid improperly called oil of Camphor. Dr. Perswell recommends a beautiful formula for exhibiting Camphor, which I most always use: he directs, drachm of Camphor to be triturated with one scruple of Myrrh - one drachm of Gum arabic & as much sugar & gradually pour on 8 ounces of water, no preparation whatever is preferable, & the mixture is perfectly transparent. Dr. Barton proceeded to give a long account of the effects of Camphor on different animals in order to prove it to be a highly stimulating medicine - - -

February 4.th

Camphor acts on the solids to which it is immediately applied by a habitus to which it is immediately applied is thrown out. It is also very probable that a small portion of it is absorbed this is proved by the odor of camphor being very perceptible in the perspiration. Dr. Mauro has made several experiments with camphor on Frogs which should not be overlooked. By the experiments on absorption, he tied the aorta vena cava & lymphatic veins of a frog, & then applied camphor to the exposed muscles on the lower limb 5 hours after there was no perceptible impression on the System. In another frog exposed under the same circumstances except that the nerves were cut & the lymphatics left uncut, the smell of camphor was soon perceptible on every part of its body. Camphor not only acts as a Stimulant on animal bodies, but likewise exerts a peculiar effects on Vegetable Substances, plants which have begun to decay will very often be revived by camphor. If a little of the Spirit of camphor be added to the water in which plants are growing, they will flower much sooner & grow much faster. I have stimulated several plants to such a degree, with this article that they have sweated very profusely. Yet it must be acknowledged that no odor of camphor was perceptible in the perspiration. Too much camphor will destroy vegetable substances equally as soon as too much stimuli of any kind will destroy animal life bodies.

Of its effects on the human body. Dr. Whitt once ventured to give half a drachm of camphor to one of his Patients it produced great ^{pain} in the Stomach; dimness of sight an acceleration of his pulse & a great confusion of head, the Patient was brought out in the open air & in a little time he recovered. In the year 1764 Dr. Alexander made several experiments with camphor, he once gave two scrupels to a maniacal Patient which produced Vertigo Convulsion tremors & a disposition to sleep the heat of the body was reduced one degree of Fahrenheit Thermometer, as was ascertained by applying it, the pulse at first was reduced, but in a short time it rose to a hundred, the diminution of heat in the temperature of the body, might have been owing to perspiration, & therefore this proves nothing. Dr. Callisau gave from 10 grs. to 3j of camphor every two or three hours & sometimes every hour in a putrid fever. He says the heat was remarkably diminished, but the eyes were universally red, & the pulse became fuller & stronger slower, I believe that the effect of medicines cannot always be ascertained by judging of the pulse other circumstances ought to be attended to.

The greater part of the ancient Physicians were of opinion that camphor is of a cold nature. Hoffman who wrote about 1714 mentioned that camphor very generally produced a sensation of cold when taken into the Stomach, this opinion is also supported by Hall a very eminent Physician, but he acknowledges the heating power of camphor.

When he says that he used the camphorated oil in a case of Cholera, but was obliged to lay it aside, on account of the great increase of heat it occasioned. It was not produced by the friction that was used, because when the sweet oil was rubbed on the belly of the same patient, violent increase of heat was observed. I once says Dr. Bullen gave to a Maniacal Patient 5 grs. of Camphor every evening & gradually increased it to 30, but without any alteration for the better. I was resolved to lay it aside, but my apothecary assuring me that Dr. C. had given a much larger dose, I again determined on giving 40 grs. at once, in half an hour after my Patient had taken it. I was sent for, & found him apparently dying, his pulse being hardly perceptible but by the prudent use of St. J. Hart's horn & friction he recovered in two hours. This case is related by Dr. Bullen to prove the sedative nature of Camphor, but the experiment was by no means a fair one, for he was not called until half an hour after the Patient had taken the Camphor, of course he could not tell in what manner the pulse was affected.

The testimony of Guarini is much more decisive, he says that Camphor has produced has produced a quickness of the pulse, & a redness of the eyes, convulsions, & a mortal ~~Phrenzy~~ Phrenzy; which was proved by dissection -

Several years ago I attended a Clergyman for whom I prescribed a Camphor gulip, by accident he took a much larger dose than usual, he was soon after delirious & had a pulse so frequent that I could scarcely count it -

Camphor when given in an over dose produces pustules on the surface of the body; this effect proves the great analogy between camphor & the other narcotics - Altho camphor is unquestionably a stimulant, yet it is not so heating in the Stomach - I am surprised that camphor has been so little used in Inter. fevers; perhaps the neglect has arisen from the great variety of opinions on the operation of camphor - It is certainly a most invaluable in those fevers, which have a tendency to Typhus - I usually advise 8 or 10 grs. of camphor to be taken for an hour before the expected paroxysm & very often it has had the effect of preventing it altogether Dr. Haley found camphor in union with balsam to be the most successful prescription in obstinate Inter. The febrifuge powers of bark is very much increased by camphor Dr. Crawford says that a scruple of camphor with a dram of bark, will have a better effect than an ounce of bark alone. Camphor has been given with the happiest effect in low nervous fevers, attended with what Dr. Cullen calls manicacal delirium - Sir Jno. Pringle has ascertained by numerous experiments that camphor is an excellent antiseptic - He found that 2 grs. of camphor would preserve a bit of meat sweet longer than 60 grs. of common salt - He exhibited camphor with very great advantage in camp fever, but he restricted its use to the latter end of the second or beginning of the third stage of the disease. Camphor answers good important ends in inter. fevers -

It not only acts as a cordial, but promotes diaphoresis which is of the greatest importance in those fevers - Juven found that Camphor was superior in all inflammatory fevers attended with frequent pulse, but in fevers of great delicacy, this author adds that it is a medicine of great importance, particularly when combined with bark or snake root. Dr Calvier of Vienna prefers Camphor to all other medicines in dry gangrene, he exhibited it internally, & applied a Camphorated liniment to the parts affected. But he cautions us not to use it when the pulse is hard & full, or even if the pulse be natural if the blood drawn be sized. In Typhus fever some of the muscles become gangrenous by long pressure in these cases I have used Camphor with evident good advantage. It is a very common practice in our country to prescribe a poultice of common meal with a decoction of the bark of the root of sassafras in cases of gangrene. It is said to succeed very well & I don't doubt it. I have said that sassafras contains camphor Camphor has been recommended in confluent small pox it is said to have a peculiar effect on variolous matter. Mr Resentine says that if the skin be anointed with pomatum to which is added variolous matter & a little camphor no effect is produced; but if the camphor is left out, that the small pox may be communicated. The same author adds that camphor will also prevent the spreading of the pustules. If this be true it is an

Important remedy & will prevent deformity of the face. Hyland has used camphor with good effect in cough succeeding measles, he thinks it to possess almost a specific power - Camphor has been used in inflammatory diseases both local & general - Whirlhaff has also used it in acute inflammatory diseases, but in small doses Mr Porter is said to have managed puerperal mania ~~very~~ very successfully by camphor. I should not recommend the practice except in cases of great debility because this fever will often require the most strenuous antiphlogistic remedies. Kirkland has used this medicine in puerperal fever attended with great prostration of strength. He has also used ~~in~~ camphor in inflammation of the uterus but to this I cannot agree, I am certain it would do mischief Dr Gordon has seen this disease prevail as an epidemic, sometimes it requires depletion to great extent, and at others the cordial & stimulating plan was found necessary.

February 5th

Camphor has been much used in acute Rheumatism but in general it was united with some of the saline medicines. I think the medicine would answer a much better effect, in the chronic form of the disease Dr. Bullen relates the case of a gentleman who was advised to use the oil of camphor to his gouty toe; the pain he says in half an hour was entirely removed, but it fixed it self in the other foot, the oil was again applied & with exactly the same result as before. This was repeated several times, this case says the Dr. plainly shows the powers of camphor in driving pain from its seat, but that it has no general effect on the system. I think there has been much mischief done to the system by the application of camphorated liniments for altho it relieves urgent symptoms, it very generally translates the disease to more vital parts. A Negro boy belonging to Mr. Reed of this city had been sometimes complaining of a pain in his back, his mistress one night applied a little opodeldoc with friction to the parts affected, which soon had the effect of removing the pain, he was left alone, but in the morning was found in convulsions & soon died. In this case I judged that the pain was translated to the brain, or some vital part, which was the cause of his death. Thos. Thurman had been

A long time affected with dispepsia & also a very troublesome Rheumatic affection as he supposed of his arm. He proposed to use the apodiloe - I objected to it on the supposition that it was an arthritic affection but he grew impatient & used it, in a short time the pain was removed to the other arm, he applied it again, the disease was changed to the tongue affecting it with Paralysis, this alarmed him very much, but he was very soon relieved by the application of a blister - Go. was affected with convulsions somewhat similar to Epilepsy during the intervals, his head was much affected & his arms a little paratitic. He was advised to use the apodiloe which removed the pain in his head, but very shortly he was attacked with hemoptesis & at length died of consumption. I should never think of using any of these stimulating ointments to chronic pains unless I was very well acquainted with the constitution of my Patient. I think they are often attended with the greatest hazard. Ferriar. tells us of a case of humbug of 7 years standing attended with the greatest exostosis on the condyles of the os femoris, that was very much relieved by a solution of campher in Citric Acid, also another case of white swelling, where the pain was always very much mitigated by this medicine -

Camphor dissolved in warm water & held in the mouth
 has been much recommended as a remedy for the tooth
 ache. Camphor has been much praised in certain cases of
ophthalmia - In scrophulous ophthalmia, I have no doubt to
 hint that it might be very serviceable. Camphor is
 highly extolled as a remedy in Gonorrhoea by Hoffman
 I have sometimes employed but now I have entirely
 laid it aside, believing it to be of no use whatever.
 Mr. Bell recommends camphor dissolved in oil as a
 remedy for a remedy for choroide; among the many
 diseases in which camphor has been used, we find
 the Bronchocele, this is in most instances a local
 affection, it is often perceived in those exposed to
marsh miasmata. Camphor is a very common
 remedy in spasmodic diseases & particularly in
Epilepsy. Dr. Cullen says that he has never cured
 this disease entirely by camphor, but he has
 often protracted the paroxysms several hours -
 he prescribed it alone or in combination with
Cuprum ammoniacum. I have little experience
 with camphor in Epilepsy, but I presume it
 would be very useful in those cases attended with
 great acidity & not dependent on a plethoric
 state of the System - Camphor has been recommended
 in Chorea St. Viti. In the 12 Vol. of the Medical
 Commentaries Dr. Wilson has published the case
 of a girl affected with this disease, where

Cuprum Ammoniacum, chalybeates & a great many remedies had been tried without effect. Camphor was resorted to in the dose of 4 grs in union with a little off opopodota 3 times a day this was increased untill she took 18 grs in 24 hours at the end of three months she was perfectly well. Dr. Moore has managed recent cases with the cold bath & also by camphor - I can find that camphor has been much employed in Tetanus but in some cases it has been used with a good deal of success - Cotterill has seen the most wonderful effects of camphor in cases of tetanus, which was supposed to originate from a Rheumatic affection. In the case of Catalepsy, formerly mentioned I used camphor in the form of enema with advantage altho it often produced a great disposition to faint, a camphorated Julip has been much recommended by Dr. Weller of London in Chronic Convulsive Nocturna. Dr. Percival has used this medicine in ascites with advantage of this I have no experience. Camphor has been much praised in Dysmenorrhoea I have seen several cases where considerable advantage was derived by the use of this medicine. The use of Camphor in Mania is of antient date, it was hinted at by Paracelsus Sennatus found this article of great benefit in

Tumor Uterinus Nymphomania some Physicians deny the existence of any such disease. But I have seen two cases of it myself; it was accompanied with a plethoric State of System & one case was cured by large & repeated bleeding. It is not always accompanied with Plethora but often depends on a morbid irritation of the uterus. Dr. Caner has seen this disease in a woman 60 years of age - Who was always remarkable silent Dr. Cullen relates the case of a young man 16 years of age, who was always remarkably silent but suddenly became loquacious without any obvious cause, this continued for three weeks, when he began to be affected with confusion, so that they were forced to confine him to bed. The Dr. tried bleeding blistering & purging with any effect; he at length resorted to camphor in the dose of 5 grs. 3 times a day - This was increased to 10 grs. every evening until he took 60 grs at once, in the 24 hours; after taking the medicine he slept soundly & his senses gradually returned. I have used this medicine in several cases of mania, which occurred in the P. Hospital but am sorrow to add, that it has seldom been of much service, in one case it seemed to increase the inflammatory Symptoms of which the Patient died. The only case in which it appeared to do good it produced a salivation which lasted for some time -

The same person died afterwards with yellow fever in 1798. Camphor has been used by the German Physicians in cases of burns suspended in Mucilage of Gum arabic. This preparation is analogous to Sp. of Turpentine, & those of you who think favourable of the latter remedy, should not neglect the first. Mr. Laroche tells us that camphor is an excellent medicine to moderate drastic purges & particularly of aloes. He says also the narcotic powers of opium is mitigated by camphor. because we have seen that opium alone would increase the sear'd state of cancerous ulcer, but when united with camphor it was of essential service. yet I do not believe that it diminishes the narcotic powers of opium, because camphor alone will often produce sleep when opium fails - Laroche united Camphor with bark & found it very useful in cases of gangrene, this I can readily believe remember the experiments of Crawford formerly mentioned. Camphor is said to moderate the action of mercury & render it less purgative Dr. Murray has used Calomel united to camphor to great advantage in Herpetic affections - one scruple of camphor united to one of Mer. ointment is said by the

celebrated Rauen to prevent salivating, hence it may be used with safety in the cutaneous affections of infants. It is also recommended in Syphilis to prevent the mercury producing a thyalism at the same of syphilis been cured effectually without salivation; yet I must always fear a return of the disease; when the salivary glands have not been affected. I believe notwithstanding Mr Rauen's assertion that camphor will not prevent the mercurial ointment from affecting the glands, in many cases it appeared to render it more active. The preparation I have mentioned of camphor & mercurial ointment is recommended by Mr. Gome in cancer of the scrotum when having a venereal origin. I have used this preparation myself in similar cases with great advantage. Camphor is said to remove the unpleasant effects of an over dose of squills. It has also been recommended to correct the acrimony of Cantharides. Dr. Hecorder mentions two singular cases of Strangury having been produced by camphor, but they are rare instances. Dr. Cullen has never seen such an effect of the urinary organs from large & repeated doses of camphor. I have never seen such ^{an} affection myself. But for the relief of strangury I should much rather try bladders of warm water to the pelvis, the warm bath & opium, or what has succeeded better than all mustard plasters to the ancles.

Feb. 7th

Camphor may be given in doses from one to two grains up to sixty; in small doses it appears to exert very little action on the system, & unfortunately in large doses it is apt to disagree with the Stomach. It may be given suspended in the yolk of an ~~egg~~ egg mucilage of Gum Arabic; or sweet almonds.

But the best preparation is Dr. Persival's formidly mentioned. Huxham recommends vinegar instead of water to be used, in suspending camphor; he says it is much less apt to disagree with the Stomach ^{to give camphor.} I don't think it proper, in a solid form, it is apt to disagree with the Stomach. When prescribed with bark it is necessary to add spirits of some kind to enable it to powder finely.

Coniferae. all the different species of pines and Larix, belong to this genus, they all afford substance whose medical properties are nearly allied to Turpentine, the common turpentine improperly called Venice turpentine is the produce of the Pines. Larix this is a substance possessing a peculiar odor & capable of inflaming the skin. By many practitioners turpentine is used as an application to fresh wounds. If we were to reason from analogy we should think

It was highly improper; fresh wounds is generally attended with inflammation. Yet I must acknowledge our experience of the effects of different articles of the Met. Med. often contradict our theory of their action. The turpentine appears well suited to wounds that have become placed & when the suppurative process have not gone on well.

The oil of turpentine has been much recommended as a remedy for Burns & Scalds. The opinion of medical men are various on this subject, some contending that it is highly injurious, while others place the greatest dependence on it. It is related by Mr. — that a lady burnt both of her arms, from her elbow to her fingers, one of the arms was dipped into Sth. of turpentine, the other one into cold water, the pain of the first one was entirely removed in two hours while the arm which was in the water, was very painful six hours afterwards. From my own experience I am inclined to believe that turpentine is not so highly estimated, as it was some time ago.

Friction with turpentine is highly useful in Typhus fever, but it must be restricted to the third stage. The oil of turpentine is frequently used in Chilblane & to frozen parts with advantage. Capt. Pike tells us that his men were more relieved by turpentine, than any other article to which they had recourse to —

The Spirits of turpentine is a universal Stimulant & very often proves laxative in obstinate constipation. The best medicine I ever employed was half an ounce of turpentine, suspended in a watery solution with the yolk of an egg & thrown up the rectum. Turpentine always has a tendency to pass off with the urine to which it communicates a violet ~~or~~ color. It has been denied that turpentine is ever absorbed, but that the effects produced by it are entirely owing to its being taken into the lungs. I think that the experiments which have been instituted on this subject are by no means decisive. Turpentine has been given in the form of enema for the purpose of checking vomiting in yellow fever & often with great success. The Diuretic effects of turpentine led physicians to use it for the ~~for the~~ prevention of calculi & I think there are some cases in which it might be useful, but if calculi be attended with any signs of Nephritis turpentine ought to be strictly forbidden. Gleet is a disease in which turpentine has been used with the greatest advantage, I have succeeded with this, when everything else has failed. Dr. Cullen seems to think that it acts by exciting a new inflammation. That such is the action I cannot for a moment doubt. Because riding on horseback, & intoxication has cured it, a fresh attack of Gonorrhoea has also cured it.

16 or 20 drops of turpentine, halsam of capisce or Canada
halsam may be given three times a day, & it seldom fails
 to succeed. Sometimes I have given alternately turpentine
 pill & carbonate of Iron, & by this means I seldom fail
 to cure my patient. There is a disease very like Gonorrhea
 in which this medicine has also been recommended
 viz the whites or Leucorrhoea but Dr Cullen has never
 found it of any service I formerly hinted at the use
 of this medicine in Dropsy. Dr Henderson relates
 the case of a man who had been affected with Dropsy
 of the abdomen for a long time, he had been tapped
 more than once for it, his Physician was preparing
 for the operation again. when the man was persuaded
 to have nothing more to do with his Physician. but
 to use turpentine pills, he accordingly took a great
 number of them, which brought on a plentiful
 diaphoresis, & the swelling of his abdomen gradually
 ceased & finally he got well & has remained so for
 many years - I have tried this medicine in Dropsy -
 but am sorry to add it has never been successful.
 The virtues of turpentine reside in an essential oil
 which it contains in a abundance - It inflames the
 skin, & is healthy to the Stomach, but it does not
 purge like the Spirits from which it was obtained
 Dr Stedman relates the case of a woman in
 whose pain in the kidney, & Stricture followed

The use of 25 drops of this oil, she afterwards died of
Diatetis & another case when vomiting & strangury
 followed the use of this medicine. Mr. Home recom-
 mends a tea spoon full of a mixture of two drachms
 of turpentine with an ounce of honey, every
 three hours in obstinate cases of Sciatica, he
 says that a sensation of heat was excited in
 the part affected in less than 2 hours, & the pains
 were gradually removed. The oil of turpentine has
 been recommended in hemorrhages. Dr. B does not
 object to it in passive hemorrhages, but I would be
 very unwilling to employ it in the active kind.
 Yet some of the most respectable British Physicians
 speak of turpentine in the highest terms in Uterine
 hemorrhages. The anthelmintic powers of turpentine
 have been well established. It appears to be particu-
 larly adapted to destroy the tenes or tape worm.
 Turpentine has been employed with advantage
 in Deafness arising from torpor of the membrana
Tympani. The membrana Ovipari has been
 clearly proved by Mr. Home to be a muscle & like
 other muscles it becomes more active by use. This
 I have taken notice of ⁱⁿ my own case. That turpen-
 tine is absorbed into the circulation, when taken
 into the stomach is proven by the following case
 A man in the St. Hospital to whom I gave the
Œpt. of turpentine for a chronic Rheumatism.

Had a violet smell in his urine, I dipped a piece of blotting paper into it, but no smell of turpentine was observed, but when the paper becomes a little dry & the watery parts of the urine had become evaporated, the smell of turpentine was easily discernible - Burgundy Pitch has been much employed in Tinea Capitis, but it is at all times disagreeable remedy, it becomes impacted into the hair, & then it acts only mechanically, by surrounding the roots of the hair & removing them when it is extracted. — — —

Teley. 8th

Pix Liquida. This is obtained from the fir tree, pines & several other trees by boiling the mass of the trunk & branches. The tar is rendered somewhat empyreumatic; the medical properties of tar are very analogous to those of turpentine, but it is not so powerful a medicine & is much more unpleasant to the stomach. Dr. Cullen has used an ointment of tar & mutton suet in certain cases of Lepra attended with ichthiasis but not with as great success as expected. Tar in union with the root of Elicampagne has been recommended in asthma with what success I am unable to determine. Tar water often purges, it is also a diuretic & Sudorific. Dr. Cullen recommends this medicine in Dyspepsia - It is also of essential service in scorbutic diseases. I have now to speak of the Balsam Capivi to speak of, it belongs to another genus. This is an important article of the

It is obtained from the Copaibera Balsamica in
 Peru. Externally this medicine has been used for ulcers
 on the legs and various other affections, its medical
 properties are very near allied to the Turpentine. The
Balsam Copai has been very generally employed in
 Gleet - 10 drops on a lump of sugar twice a day has
 cured this disease when every thing else failed. In large
 doses it often proves laxative. Shaeffer recommends
Balsam Copai to be triturated with the yolk of an egg
 as an injection in Gleet & Gonorrhoea of long standing
 It is often of consequence to know when Gonorrhoea
 has terminated in Gleet or in other words to
 know whether it is capable of communicating
 the disease, if you have any doubt on this subject
 recommend your Patient to use a cordial diet of
 animal food & good wine & porter & to exercise on
 horseback, if the colour of the discharge becomes of
 bright yellow or increases in quantity
 you may always be certain the disease may be
 communicated - In England the Balsam Copai
 is used in recent Gonorrhoea, but I should it
 a hazardous practice, it is apt to produce Hernia
Generalis & in some instances has translated the
 disease to the kidneys. Strictures in the Urethra
 has also followed the use of medicine. Among the
 diseases in which this Balsam has been used we
 find the irregular ^{or atonic} Gout. I have often used it in my
 own case -

With advantage. Dr. Bullen has employed this medicine in hemorrhoids or piles with a very good effect. I have imitated this practice, but not with as much advantage, except where it proved laxative.

Balsam of Peru. It is the produce Sulcifera balsamica in the Brazils, it is obtained by boiling the branches of the tree. It has a very strong smell & bitter taste, when distilled it affords a salt very similar to the flowers of Benzoin. Baron Van Sinceren used this balsam in wounds of the Throat & thereby preventing Tetanus. But Dr. Bullen & other Physicians especially the British have very little experience in its use. Dr. Sydenham recommends the balsam as a laxative in Colica pictoria.

Sweet Gum. This is a beautiful Gum resin having an odour very like the balsam of Sassafras, its medical properties are not very well ascertained. In Diarrhea & in Scorbutic gums this medicine has been highly praised, also in Psora in form of an ointment.

Guaiacum. This is the produce of the Guaiacum officinalis of Linnaeus growing in the West Indies Hispaniola & other West India Islands. The wood of the tree is so heavy that it sinks in water. The bark is of a dark colour, when rasped it gives out an aromatic odour. Guaiacum is neither a Gum Resin as Mr. Brant has well shewn it is entirely soluble in alcohol, but not at all in water. It appears to be a peculiar

Peculiar Vegetatile substance distinguished from all others. The best Guaiacum is very brittle, has little tenacity & when rubbed between the fingers of a black colour, & possessing a pungent smell, Guaiacum was formerly introduced as a remedy for Syphilis & in the South of Europe it still retains its reputation. But I believe few of the Practitioners of this country would be willing to trust to it entirely. In Venereal Blotches Mr. Bell tells us he has given this medicine with great success in one or two ^{recent} cases.

Mr. B. prescribed this medicine with the effect of suspending the symptoms for more than a month but they afterwards returned. Astruc particularly recommends this medicine in cases of Syphilis combined with Scrophula. The Colatit tincture of Guaiacum has been much used in Gleet & Gonorrhoea, I should be afraid to try except in obstinate cases & those of long standing, it has also been given in fluor albus. I have often used it in Gleet with the happiest effect. Mr. ^{recommends} a table spoonful of the following tincture to be taken every every morning fasting. Take of powdered Guaiacum two ounces, infuse it in three pints of wine for three days frequently shaking it. This Gentleman has used this tincture in the smelted ledges succeeding Gout, with very great success.

Dr. Bullen has known the Colatit Tincture of Guaiacum put off the paroxysms of Gout for some time, but they generally returned many times with greater violence. There are two tinctures of this medicine in use, the one a simple tincture the other a compound. Simple tincture of Guaiacum. Take of powdered Guaiac. half a pound, macerate in two pints of rectified Spt. for several days—

Compound tincture Take of powdered Guaiacum 4 ounces add to it a pint & a half of Spirits of ammonia, Infuse for 14 days & strain—

In chronic Rheumatism in Paralysis & many other diseases, the Colat. tincture is one of the most important remedies. Bergius, ^{recommends} a preparation of this article which I very commonly employ, he directs half a pound of Guaiacum to two drachms of Gum arabic, a little sugar & 9 ounces of cinnamon water, to be macerated together for several days. This preparation is very apt to become yellow colour; in a short time after it is made. The Colatit tincture as a universal stimulant. Fothergil has found nothing more useful than this medicine to restore the use of limbs, that have been impaired by mineral poisons. It has also been given in certain cases of Dropsy with success, but I believe these instances are rare, when it has been serviceable it acts principally as a diuretic. In dyspepsia accompanied with arthritic symptoms, Guaiacum used alternately with carbonate of Iron is highly recommended by Dr. Henson.

July 11th

Myrrha This is a Gum resin of a brown red colour
 a fragrant smell & aromatic bitter taste; the real
 botanical relation of this article is not known Mr. Bre
 says that it is obtained from a species of Minasa, or
 sensitive plant. Myrrha is evidently a stimulant
 to the whole system, in small doses it improves
 the appetite & promotes digestion; in the dose of 30 or 40
 grs. it creates nausea & sensation of heat, the pulse
 is also greatly increased. Dr. Bre recommends a compound
 of Myrrha potassa & Sulphur of Iron as a tonic to
 prevent the fits of asthma. Dr. Heberden used
Myrrha with opium to great advantage in
Chorea St. Viti. By some practitioners myrrha has
 been much extolled in the cure of Intermittents
 Dr. Armstrong the celebrated fact employed it to the
 extent of a drachm in union with nectare every
 four hours, to prevent the fits of Intermittents, he however
 more generally used Myrrha in combination with bark
Myrrha has sometimes been used with success in
Angina Maligna, Particularly in those cases when
 you have reason to believe there exists a scorbutic
 diathesis - In 1774 Dr. Griffith used Myrrha & sulphate

of Potash in slow fevers, the practice has since been very common. Myrrha is highly extolled as a Pectoral by many of the British Physicians in Physical cases. But Dr. Cullen is not friendly to the use of this medicine in diseases of the breast. he says its heating quantities will prove very injurious. Externally Myrrha has been used in ^{diseases} of various kinds, in those that are placed it may often be useful, but on the whole I believe that it is not thought as much of as formerly.

In the very troublesome disease Chlorosis or febris alba myrrh has had the happiest effect. Dr. Sydenham succeeded this medicine in union with Iron, where every thing else failed. The virtues of myrrh are extracted both by water & spirits of wine, but more speedily by the latter. A late writer is very much in favour of myrrh as a Emmenagogue, he says it will succeed in 88 out of 100 cases, this is going to extremes.

Mizerion. This is a native of Portugal, a decoction of this article is the principal active medicine in the Lisbon diet drink, which has been so much talked of as a cure in Syphilis, the receipts for making it was for a long time kept a secret till Dr. Ruysel & Munro published an account of it in the Philosophical transactions. For the Lisbon diet drink.

Take of sassaaparilla ℥ij of mizerion ℥ss of the red & white sanders each ℥j of Guaiacum ℥ss, boil one gallon

Gallon of water, till one half is consumed, then strain
 and add three drachms of liquorice. This decoction is
 frequently used in venereal botches & sores on
 the bones - Dr. Monro has never succeeded in a
 single instance in curing this disease, except when
 mercury had been given - Dr. Cullen recommends
 this decoction in cutaneous affections, Mr. Bell says
 that he cannot determine whether this medicine
 ever cured the disease alone, but when mercury had
 been used with it, he says that he has found it very useful
 even in those cases where mercury it self had failed.
 In the spreading ulcers which succeeded buboes
 this decoction has been found eminently useful.
 Mercury in those cases only serve to increase the
 disease - The decoction of mezerion has been recom-
 mended has been recommended in hemie humeralis
 but not in the first or second stage, but after the
 inflammation has subsided & an hardness only remains
 in those cases it is of great use. The mercurate of Mercury
 may be blended with honey so as to escape detection
 by any of the chemical tests, hence it is more than
 probable that this article forms the basis of all our
 ant. Sulfuric remedies. mezerion acts a powerful
 Stimulant to the fauces, & might be useful to stammering
 The bark of the root of mezerion acts as a pericarpit
 is extremely acrid & readily inflames in the skin it
 will be a good substitute for mustard.

Blisters raised by it on the shoulders have been found of great service in Latitral Ophthalmia.

Siliquosa, The plants included under this head are very extensive, I shall only treat of two or three of them. They are called Siliquosa from the form of their seeds. Mustare a table spoon full of the unbruised seeds taken every morning, has been known to prevent the paroxysms of Vernal Intermittents; mustare will often be a good addition to bark - A tincture of mustare has also been found useful in Intermittents, but in using it much caution is necessary. Van Swieten knew a violent Inflammatory fever produced by it of which the Patient died. In Chronic Rheumatism & Palsy where inflammation is not present, mustare has been found very serviceable, it often proves laxative the secretion of urine is also increased, the bruised seeds is very often emetic. A very weak infusion of mustare is one of the best antiemetics; with which I am acquainted; be particular in making it very weak otherwise it will increase the disease.

Horse Radish an infusion in wine is also an good anti Emetic Bergius recommends the horse radish to be cut into small pieces without bruising it, a table spoon full has been known to check the most violent arthritic vomiting. Mustare has been recommended in Dyspepsia.

In those attended with great debility, I have no doubt but it might be very useful, but I don't think it will ever come into general use. Almost every diuretic may be so managed as to be useful in Dropsies. Mustard has also been recommended in scurvy by Maunsey, it acts necessarily on the skin & kidneys. The good effects of mustard as a sinapism is known to you all. it does not often vesiculate the skin, but it frequently produces intolerable pain, we can sleep during the action of cantharides, but very seldom when sinapisms are applied; since mustard seldom raises a blister, there can be no doubt but that it acts by creating a new action. In the convulsions of children during the time the time of teething I have found nothing to give so speedy relief as sinapisms to the wrists & ankles, they are always useful in convulsions during the eruptive stage of Small pox. They should not be continued longer than 2 hours, this should be considered the maximum. In Typhus fever they are always very important, in the first blisters are preferable, they are less heating, but in the last stage of the disease sinapisms are very useful, I seldom use them very strong.

In Croup or Hives, the advantage from sinapisms is much greater ^{than} from blisters; they act in a much less time. In Scarlatinae anginosa sinapisms to the thorax are useful applications. In many cases of Cortigo from Gout I have often employed sinapisms with manifest advantage. But you ought to be cautious not apply them to the pained part; otherwise the disease will be translated to other parts more dangerous - I once applied a sinapism to the back of my neck, for a very troublesome Cortigo it was considerably increased. Deafness which ~~occurs~~ ^{succeeds} often succeeds an attack of the Gout is effectually removed by sinapisms to the verists - Strangury from blisters may be often cured by mustard plasters. I have prevented the paroxysms of an Epilepsy by applying sinapisms half an hour before the expected paroxysms, they are found particularly useful in those depending on stability of the System & recurring from habit. In the convulsions of lying in women Synapisms has given great relief. A Synapism to the penis has in one or two instances restored the power of propagating our species. Chaplat relates the case of a young man who from excess in the pleasures of Venus had lost not only his venereal desires, but the power of erection, the application of a sinapism near the pulvis effectually restored the use of that important organ -

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Feby. 12th

The Cholera morbus is in general so violent a disease, that time is to be lost; Laudanum is an excellent remedy, but it acts much more powerful when at the same time sinapisms are applied to the ankles: I don't recollect of ever losing a single patient in this disease after I adopted the above practice. Sinapisms have often been employed with a view to prevent the paroxysms of Inter. fevers - particularly when they are kept by the power of habit - I have been in the habit of using mustard in a particular form, which as far as I have know originated with my self. I mean a Mustard bath or Pediluvium - It is made by throwing into a bucket of warm water, a large handful of mustard bruised & stirring it well, the feet must then be immersed in it for some time. In this way, I have often obtained ^{all} the good effects of mustard, without exciting much inflammation or irritation of the skin -

Alliacia under this head I shall treat of Garlic Leek & Asafoetida - Garlic is an article very worthy of your attention, as an article of diet it appears to be a very stimulating one -

And suited only to strong & robust constitutions. Garlic is neither a condiment nor nutriment, it is eaten too large to belong to the former, & too little to be considered as a nutriment. Garlic has an acid taste & a very strong odour which is in some measure dissipated by boiling, an essential oil may be obtained from it, which possesses all the properties of Garlic, it sinks in water. If Garlic be bruised & applied to the skin, it readily inflames it & not unfrequently raises a blister, but in this respect it is not so powerful as the Siliquose plants. When taken internally it stimulates the Stomach & improves digestion. Its odour is very perceptible in the perspiration, & to some people it is very disagreeable. In warm climates the onion is much milder & may be eaten in much larger quantities. The Stimulus of Garlic is very powerful, it is diffused over every part of the body & often excites a phlogistic diathesis. In person who have had a Gonorrhoea Garlic very commonly creates an acrid Urine, in one case I knew all the symptoms of Gonorrhoea produced only by eating a small quantity of this article. As Garlic is such an universal Stimulant, it has been recommended in certain cases of Dropsy. Dr. Sydenham has cured several cases of Dropsy, entirely by the use of this article. Dr. Monro has used the Herb, which is allied

To the Garlic in the same disease with manifest
 Upon the whole I think Garlic will be found immi-
 nently useful in all those dropses depending on a
 Cachectic state of the System Dr. Lind has found
Garlic of service in Scurvy - as Garlic acts so power-
 fully on the Stomach & other parts, it might be
 very useful in Asthma, by inhaling its odour
 into the lungs - It is often one of the best expectorants
 I once attended a lady for a Consumption with a
 Hydrothorax, the mucus accumulated in such
 quantities in the trachea, that my patient was
 nearly suffocated when ever she attempted to lie
 down, in this case I found nothing so effectual as
Garlic. The Stimulating qualities of Garlic is
 proved by its curing Intermittants - Bergius
 recommends a clove of Garlic to be taken every
 morning, & increase the dose every day untill the
 fever begins to decline, when the medicine may
 be diminished - This Physician also used Garlic in
 deafness, he recommends the unspun silk of the silk
 worm to be impregnated with the juice of onions
 & inserted into the ear, it may act either by altering
 the state of secretion, or by restoring the sensibility
 to the part, I have often been much benefited

By this application my self. The juice of onions is a very common remedy for making the hair grow, hence after the cure of tinca capitis, it might answer a very important indication - of the anthelmintic virtues of Garlic, I shall speak more fully hereafter, I shall only observe that it is a very common remedy in Britain. Garlic is a very common domestic remedy in Croup or Croup, but I should think it was too irritating, to the fauces to be serviceable.

Asafetida. This is the produce of the Terula asafetida of Linnæus, a large umbelliferous plant, which grows in the province of Lard & Chorasane in Persia. The process of obtaining it is the following - The earth is cleared away from the top of the root of the oldest plant, the leaves & stocks are then twisted around & made into a covering for the root from the sun. In this state the roots are kept for 40 days, when the covering is removed, & the top of the root cut off transversely. It is then protected from the sun for 48 hours, when the juice that exudes is scraped off - In this manner it is eight times repeated in six weeks. The juice thus obtained has a bitter acid & pungent taste, & is well known by its peculiar nauseous smell, the strength of which is the surest test of its goodness. The juice when first extracted is white, but soon becomes of a ^{brassy} ~~brassy~~ colour - asafetida is a gum resin, its smell & taste resides

Principally in the resin & may be very nearly all extracted by the Spts. of mine.

Professor Valtater tells us he has known this article to salivate, he proved it to be produced by this substance for by either increasing or diminishing the dose the flow of Saliva was more or less increased.

Bergius has used *Opapetida* in Inter. fevers, in recent cases he never found it of much advantage, except when in union with bark. *Opapetida* effectually

Spears which often occur in dyspeptic Patients. It appears says Dr. Cullen to be well suited to flatulent colic. In Hysteria it penetrates the nerves

more readily than any other medicine. *Opapetida* has been successfully employed in Epilepsy by Valtatin, to do good he says large doses are requisite a syrup made by triturating three drams of *Opapetida* in one ounce of water & a little sugar is recommended by Cullen in Chorea St. Vita-

& mania, the dose is a tea spoon full or two every 2 hours

In spasmodic cramp so accurately described by Dr. Miller *Opapetida* was found to be one of the best remedies, two drachms of *Opapetida* with one

ounce of Spt. The anginae maligna trachealis is a very fatal disease, I have seen four cases three of which died, the disease at first is not at all cramp, but an angina accompanied

With malignant Symptoms, about the time that our little Patients appears to be getting well, the disease is suddenly translated to the trachea, & it not unfrequently produces suffocation. Expectorants must be immediately resorted to oxymel of Squills carbonate of ammonia apsafetida & Gum ammonia, have all been recommended in this terrible disease, but all of them have occasionally failed. Dr. Ware lost three of his own children in nine days. Tumors of the abdomen from swelling of the mesenteric gland have been successfully treated by apsafetida. Dr. Mours, seems inclined to think that apsafetida will prevent some of the disagreeable effects of opium, many of his patients affirm that heaviness of the head seldom follows the use of opium, when in union with apsafetida, this last article operates on many as a laxative & particularly in old people. I have known a single grain to operate as a laxative in delicate female. apsafetida has been exhibited in various forms, in the solid form it is much less active; the Spirituos tincture of the London college is an elegant preparation. If a person breathes an atmosphere in which apsafetida has been burnt, his urine & faces will in a short time be tainted with its peculiar odour.

Gum ammonia. - This is a gum resin, ^{but} we are as yet unacquainted with the plant which produce it. It has less smell than any of the fetid gums, Dr. Cullen thinks the heating powers of this article is more injurious, than any benefit we can expect to derive from its use as an Expectorant.

July 14th

Valerian This is not a native of our country, as is commonly supposed, the wild Valerian is much more active than the common domestic Valerian, which is raised in gardens, it is the roots only which is used in medicine. The smell is strong & to many disagreeable. Some it is not so. The taste is warm bitter & somewhat acrid. Valerian is unquestionably a stimulant, but it is not so useful as many others we have spoken of. It is Diaphoretic Diuretic purgative & somewhat Emetic. Valerian is said to have produced a considerable nausea & irritability of the Stomach Dr. Tissot never observed this effect, altho he had persisted in it for a considerable length of time Salus Calennia first used this medicine in Epilepsy in the beginning of the 17th century, since his time it has been very generally employed. Weffer mentions several cases of boys & girls being cured by Valerian & in one case of a girl who never had menstruated. The disease was cured in a very short time, altho she had 15 fits in 24 hours. Sauvages relates of a man who had been affected with Epilepsy, for a considerable length of time; many medicines had been tried to no purpose. The Valerian effected a cure in a short time. Dr. Cullen thinks this medicine might be given in much larger doses than is commonly prescribed. Quarin supposed & I think with a good deal of justice, that the reason

We so often fail in the cure of Epilepsy is owing in a great measure to inattention to diet. Dr. Rondelet Monro has never made an entire cure of Epilepsy with Valerian, but he has seen great advantage from its use. Dr. Haller speaks favourably of this medicine in Epilepsy & Hysteria I have given this medicine in the Pennsylvania Hospital in several cases & but I have not been so successful as many others. But I must acknowledge that the cases for which I prescribed Valerian was very unfavourable, one case was complicated with Mania & another with fatuity of mind. In my private practice I have used this medicine more successfully. a fine healthy young man (now 23 years old) was affected with Epilepsy when at the age of 11 I had prescribed a great variety of medicines to no purpose; mercury had been given in sufficient quantity to salivate, his mother observed to me one day, that she suspected his disease to depend on worms. I then prescribed ten grains of Valerian in powder to be taken twice a day, this soon had the effect of bringing away a great quantity of worms, & he had no fits afterwards. Chorea sometimes arises from causes very little suspected viz from worms, when they are discharged the disease sometimes ceases. Equal parts of iron filings & Valerian, have been found to answer this indication very well.

In Hemicrania this medicine has succeeded very well, but in general large doses are found necessary. Carmine recommends ʒss drachms in 24 hours. This is a pretty good dose. Valerian in union with iron bark & Volatil alkali has cured periodical headache when a great many powerful remedies have failed. Dr. Monro recommends the following mixture. Take of Valerian ʒij Bark of ~~cortex~~ concrete ammonia ʒij Symp. of ginger sufficient to make an electuary, of this a tea spoon full is to be taken three times a day during the intermission. Valerian has been recommended in dimness of sight, from various diseases of the eyes, particularly in amaroasis of Gutta Serena. Mr. Pitcher has published a valuable account of this disease, he supposes it to depend very often on an affection of the Stomach, which has been proved by a cure being effected on removing the disorder of that Viscus; this he says has often been done with Valerian, taken to a considerable extent. I have seen two or three cases of this disease in our hospital, where Valerian appeared to do good, altho it did not cure the complaint, probably these cases arose from an organic affection of the brain. Valerian is much praised in fevers of the Typhus kind. It is said to be equally effectual as Virginia snake root, which is saying a good deal in its favour.

Valerian is an excellent medicine in habitual costiveness particularly for old people, as an anthelmintic Valerian has also been highly extolled; we have seen its good effects in Epilepsy formerly mentioned. I shall treat more fully of this article in another place. Two tinctures are in use - The simple tincture is made by digesting for 3 days ℥ij of Valerian in ℔ij of Spt. vi. The compound tincture is made by infusing for the same number of days ℥iv of Valerian in the compound Spirits of ammonia. The dose is from one to two drachmas. But the most respectable Physicians prefer giving Valerian in substance to any other form -

Caster by the vulgar, this is thought to be the testicle of the beaver, the name of caster is given to two or three bags or rather glandular bodies about an inch & a fewth in length, situated in the inguinal region of the male beaver, when recently cut it is very soft & almost fluid, but which soon dries & assumes a reasonable consistence in a short time. This substance has an acrid & bitter taste, a strong aromatic & piceous odour - The Prussian caster is generally the most pure. The chemical properties of caster is very similar to musk; it is resinous & gelatinous, when distilled it yields an essential oil. W. Bullen prescribes it as an antispasmodic in the doses of from 10 to 30 grs. many Physicians speak of this medicine very highly in Epilepsy Theriacal clearly proved the stimulating power of this article by exhibiting it in Typhus fever & noticing its effects on the pulse

Caster has been celebrated as an anti. Hysteric, but that it is now much less thought of than formerly. It may be given in doses from 10 grs. to one drachm. A tincture is made by infusing one ounce of caster in a pint of stib. for several days. Some persons suppose that caster possesses a narcotic power but of this I can say nothing.

Loose or saffron, will be spoken of when we come to speak of Emenagogues, it is very common domestic remedy in fevers to drive out eruptions.

Stimulantia Excrementia I shall follow Dr. Cullen by first treating of the Errhines. These are medicines which produce an increase discharge of mucus from the nose, with or without sneezing. The stimulus of an errhine often continues for several days & by producing an afflux of fluids from the neighbouring parts is often serviceable in Rheumatic congestion. Dr. Cullen prescribes errhines for headache & certain diseases of the ear, in general these medicines act altogether topically, but in a memoir which I published in the 5th Vol. of the Philos. Transactions, I have proved that errhines often produce effects on the Schneiderian membrane, when taken into the Stomach. In Hydrocephalus Internus the

The Emetics are often prescribed, but I doubt whether they have ever done any good, the shock that is given to the whole system is very distressing Dr. Garin who has written learnedly on Hydrocephalus internus takes no notice of Emetics whatever Dr. Patterson seems to think this a great neglect of Dr. J. for in certain stages of the disease Emetics are highly useful, but you cannot be too cautious in giving these medicines in the first stage of the disease, the system then being a highly irritable state, & the mercurial Emetics has been used in Epilepsy with more success, particularly in those cases where there is a determination of blood to the brain, without any organic affection. The best emetics in these cases is the sulphate of mercury in union with Cochineal or leopore root. There are some cases of Deafness where Emetics may be used with safety. Deafness may depend on a great variety of causes, there is an affection of the Eustachian tube generally brought on by cold. Dr. Sims of London describes it thus, there is a noise issuing from the ear, resembling that which water makes in a tea kettle before it boils. It is often described by the patient to be ~~the~~ like the roaring of a high wind or the roaring of water. This disease is often cured by blisters round the ears, cupping & large bleeding from the arm has effected a cure, flannel night shirts should always be worn. Emetics have been recommended in Amorosis, I have used them in two cases, I think with advantage, in one lady I used it with manifest advantage.

The medicine was no doubt assisted by the seton which she had in her neck, when the disease arises from acute fevers or from the action of lead, I should think Eubine, would be of no service. It is not true as is generally supposed, that in amarois the pupils never contract, the case of the lady alluded to above proves the contrary. She had all the symptoms of amarosis, not being able to distinguish day from night, yet the pupils of the eyes contracted regularly. I wish the Gent. from South Carolina would inform me whether the rice fields have any agency in producing Gutta Serena. I am inclined to think they do not.

Feb. 15th -

Eubines may be divided into mineral & Vegetable, those from the mineral kingdom are not very numerous. The fourth mineral is the most important. I have ~~spoke~~ spoken of it before, & shall add but very little more. In two instances I have known this medicine to salivate, in one case Calomel & mercurial ointment had been used with a view to salivate, but to no purpose, the Sulphate of mercury had been used with a different intention & had the effect of producing a copious salivation, this case is very important it shows the propriety of trying the mercurial snuff,

when we fail to excite a salivation by the usual means, a solution of white vitriol snuffed up the nose has been used as an erethic in Catarah. The vapours of lime, sometimes produces a violent sneezing. The common hust has long been used as a Stimulatory. It was employed by Galen & Plautinus in deafness & tooth ache it is the juice that is commonly employed. I have used it myself & but it appears to be a feeble erethic.

Sparganium, this is the most useful of the erethics, it is found growing on the rich hill in Virginia under the name of cotton root mild ginger &c. In opthalmia this is one of the most useful of all the Stimulatory. The lily of the valley is said to be a good erethic, but I have never used it. The common poke root is also Erithic. The squill is considerably Erithic I have often used it myself. The effects of tobacco as an erethic is however to give all it is very much diminished by long use. Dr. Cullen observes that if tobacco be laid suddenly aside after producing copious flow of saliva, dangerous consequences will ensue. I was once attached to the use of snuff, but was compelled to lay it aside on account of a very perceptible injury of my voice. In whatever form tobacco is used it is generally narcotic, altho from habit this effect soon ceases to be observed. I am acquainted with several persons who are troubled with sick Stomach, faintness & sometimes cold sweats every time they venture to a pinch of snuff. Dr. Cullen has seen all the Symptoms of Dyspepsia follow the use of tobacco. The pain he says returned periodically & was very generally prevented by leaving off the Snuff.

The professors at Edinburgh tell the story of a young lady who married a Scotch Nobleman, who was much older than her self; the old man was much attached to the use of snuff, which at length became very disagreeable to his lady; she insisted on his leaving it off, he did so, & was very soon attacked with apoplexy, his Physician by proper remedies soon made him recover, but they requested that the snuff should be again resorted to, but in a short time the snuff again became unpleasant, & was laid aside; the same consequences ensued he was recovered a second time, but the third time his disease proved fatal - Mr Lare is of opinion that nervous diseases have become much more common since the introduction of tobacco; altho I cannot subscribe to the opinion of Mr Lare - yet I consider the practice of using tobacco in any form to do great mischief to the society; notwithstanding my aversion to tobacco candour compels me to acknowledge that it does not appear to be unfavourable to the attainment of old age, many aged persons have long used tobacco. probably the power of habit overcomes the unpleasant consequences that often follow its use - It is remarkable that almost ever married is fond of the use of snuff - altho they never were before they become deranged - Snuff you all know is made of tobacco but perhaps Sal. Ammoniac is often added & not unfrequently a little powdered glass -

The powder of Digitalis has also been used as an Erhine, but it is far inferior to some we have spoken of.

Euphorbium is one of the most powerful errhines, it is not unfrequently produces a violent inflammation of the nose extending far down the fauces & according to Dr. Cullen Hemorrhages is often produced, perhaps this latter is not an ^{unfrequently} occurrence, the apothecaries don't like to powder this article. Mr. Barle has known a case of Cataract cured by this medicine.

Veratrum Album or white Hellebor is a good Sternutatory, it is found in various part of the united states. I saw says Barle, the most violent sneezing in a school master, by smelling a rose, which had been impregnated with this article & presented to him by one of his scholars. He was relieved by snuffing up milk into the nose.

Helenium autumnale, this is a very common ~~resist~~ plant, bearing yellow flowers, at Stanton in Virginia it is called sneeze weed, the part of the plant used is the disk of the flowers, it is more powerful than tobacco, & on many occasions may be a good medical snuff. Upon the whole I think the Erhine medicines are too much neglected in practice. Their use in Gutta Serena Cataract Diapness Epilepsy & Vertigo has not been carried to the extent they certainly deserve.

Staligones These are medicines which stimulate

The Salivary glands & causes an increase of ~~supplied~~ to be discharged. They are either external or internal, the first are those articles which when chewed increases the flow of saliva.

Anthemis Pyrethrum or pillitory of Spain. The root of this when chewed produces a copious flow of Saliva, it has been chiefly employed in tooth ache taken into the Stomach it also Salivates, the powdered root is used as an Emetic - The effects of tobacco as a Sialagogue is known to you all, it is said to be useful in Scurvy -

Masterwort, this is not quite so acrid as many of the roots I have mentioned.

Camphor is a good sialagogue, its power of curing toothache is entirely owing to the stimulus that it gives the fauces & salivary glands - The root of horse-radish is recommended by Dr. Cullen in toothache

But the most powerful of all the Sialagogues is the gaultherium sometimes called toothache tree

Sutre berry &c. it is a common remedy for the toothache among the Indians, the berries are also used by them in the Venereal disease - I don't suppose they ever cured the disease by this practice, but like guaiacum it may have suspended the disease - when taken into the stomach it is said to Salivate -

In Rheumatism & palsy it is a good medicine—

Seneca Polygama, the root of this when chewed produces a copious flow of Saliva & very speedily. It may be useful in all cases where salivation is necessary—

Of the Internal Salivagues & first of mercury I think it is probable that accident first suggested the use of Mercury in fevers. In 1701, Bomley used bark & mercury in tertian Intermittants, he always found this medicine more effectual when a salivation was induced. Dr. Chisham on the yellow fever speaks highly of Mercury. Bark he observed very often done mischief, unless when in union with Mercury this last was used generally with a view to salivation. The most opposite opinions are entertained with respect to the propriety of giving mercury in yellow fever. In my hands I can safely affirm that I never lost a patient after a true salivation had come on. But whatever may have been my success with mercury I can never consent with Dr. Chisham to trust my Patients to this medicine. In many instances we are incapable of exciting a salivation, after the third or fourth day in yellow fever it will do no good, the practice will not apply to children. it is almost impossible to salivate a child under three years old—

(214) Feby 18th

Mercury has been exhibited in intermittent fevers & I don't notwith standing advantage. But remember the objections I made on this subject when speaking of the bark, that it is cruel to Salivate a patient for an Inter. where bark could be obtained. I have never seen bark mercury cure a single intermittent of its self; in combination it may often be useful. Mercury is said to be better adapted to fevers of a remittant form. However I must confess that since I have been more sparing in the use of mercury, I have been more successful in the treatment of Intermitants. In some cases of Intermitants attended with coma Mercury may sometimes be useful. A young Gent. 20 years of age was attacked with a severe Intermittant fever. During the paroxysm he was always in a comatose state, I bled him copiously he was blistered & took bark to no purpose, a mercurial purge was given to remove a costive state of his bowels, which accidentally salivated him; immediately the Ophthalmia was perceived the coma subsided & he soon recovered. The spitting did not last a long time, & when it entirely ceased his disease returned with all its former violence. By bringing back the Ophthalmia & keeping it up a considerable length of time, he was completely cured. ---

The use of Mercurial Medicines in Dysentery has been highly recommended by Dr. Clap, he gave Calomel with a view to salivate, whenever this could be effected, none of his patients were lost. I think that mercury might be of much more service than Castor oil & saline medicines in a great many instances. I have seen only two cases where it was injurious, ~~one case~~ Upon the whole I think it would be a good general rule, that if mercury does not produce some change for the better in a short time it would be well to lay it aside. The exhibition of Mercury in Dysentery is a matter of more nicety than Dr. Clark supposed, & I hope that many of you will ^{not} prescribe it in this disease without reflecting on the rule that I have mentioned.

Mercury has been highly extolled by many practitioners as a remedy in Pneumonic Inflammation. There is a Pneumonia prevailing in marshy grounds; in which I presume Mercury would be found useful. Dr. Hamilton has written particularly on this disease, he has found no medicine to equal Calomel with opium. The Dr. has given this medicine to pregnant women with the effect of curing their complaint & without danger of miscarriage. Hepatitis is a very common disease in hot climates. In this country it often arises from the same causes as Intermittents: at its commencement every part of the antiphlogistic regimen will be proper, bleeding, purging & digitalis.

Will generally succeed. Salivation is one of the remedies in this disease at certain periods; it is injurious when inflammatory symptoms are high; yet in the East Indies bleeding is rarely prescribed, but mercury resorted to immediately: the difference of climate may make it necessary to vary the treatment.

There is no disease, not even Syphilis excepted, ^{where} mercury has been given to greater advantage than in Hepatitis. In general I have not found it necessary to carry the Salivation to any extent. If during the use of Mercury a troublesome cough & difficulty of breathing should come on, the medicine should be laid aside for a time & bleeding blistering &c. should be resorted to. In the West Indies bleeding is rarely prescribed, & the external use of mercury is preferred. I think in some cases I have used Mercurial oint. to greater advantage than Colamel Int. ternally. Bronchocele or Gaitre is an enlargement of the thyroid gland, in this disease mercury is said to have produced a cure without the aid of any other remedy. If patients would remove from the situation where the disease was induced, I have no doubt that mercury would be useful, but when the remote cause continues to act, I am inclined to believe that mercury will not cure. A lawyer was cured of Gaitre by being attacked with a malignant yellow fever. Of the use of mercury in Rheumatism I shall say but

Very little. There are numerous cases of Rheumatism
 succeeding Syphilis; these cannot be cured without Mercury;
 I have found Guaiacum to be a useful addition.
 When Rheumatism Intermitte Mercury he found of no
 service. The connection between Gonorrhoea & Rheuma-
 tism is very considerable. A Young Gentleman
 applied to me for a Rheumatic affection brought on
 suddenly by using an astringent injection for a
 Gonorrhoea which stopped the discharge. I bled him
 the pains were suddenly removed & the running
 returned, whenever an attempt was made stop
 the discharge; Rheumatic pains come on & it was not
 untill the elaps of a considerable length of time, that the
 disease could be cured. This case clearly proves
 the great connection between Gonorrhoea & Rheu-
 matism; we ought never to prescribe for a Rheumatic
 Patient, without enquiring the cause which produc-
 ed the disease. Of the use of Mercury in consump-
tion, I can say but little favourable. I have
 employed it in almost every stage of the disease
 but with without much benefit. It appears to
 be only a palliative remedy. The discharge from
 blisters appears to be equally as benificial as a
Ophthalm. White Vitriol & Spicacuanha, as I shall
 prove hereafter are much better remedies. Mercury
 has no doubt been serviceable in diseases
 resembling Phthisis, as in Morbillous Pneumony
 the great difficulty with which a salivation is excited
 in this disease is a serious objection to this remedy. -

In Cynanche Maligna (we are told by Dr. Dauglar of Boston) mercury has been used with the best effects, the disease he says, will bear no evacuation but a Stomalium. In the Cynanche Maligna Trachealis mercury is the only remedy that has been found curable. In genuine croup mercury is a valuable medicine, when the disease is Idiopathic it is much more curable than when symptomatic. I have relinquished the opinion I formerly entertained of the contagious nature of Croup. Some Physicians use mercury in this disease with a view to salivate, but as children are the usual sufferers of this disease a salivation can seldom be excited. Dr. Archer says he found several cases of croup that would not yield to seneka alone, in those cases he employed corrosive sublimate as an emetic with the happiest effect.

July 19th -

The use of mercury in Dropsy is not of modern date Dr Lind tells us that when Dropsy is produced by an obstruction in the mesenteric glands, Mercury in union with squills is an excellent remedy. It has often been remarked that the bulk of Edematous limbs was diminished in proportion to the increase discharge from the salivary glands; The cases of Dropsy to which mercury appears to be best adapted, are those cases which succeed Intermittents, & to those accompanied with febrile symptoms. But even in those cases it will be proper to precede its use by bloodletting, & other evacuating remedies. Mercury cures anasarca better than acetis, & it has often failed where other diuretics have succeeded. A patient of mine was cured of a hepatitis by Mercury, soon after a Dropsy ensued, squills were the only medicine, that had any effect in removing the dropsical affection - Mercury appears to be less adapted to Hydrocephalus than any other form of Dropsy - at the Hydrocephalus Internus appears to be the consequence of a rupture of the lymphatic glands - yet I believe it possible for every symptom of an effusion to exist without the least extravasation whatever, all the cases that I have ever seen were originally Intermittent fevers. A great many children that I have seen with this disease descended from scrophulous parents Females about puberty are more subject to this

Disorder than at any other time of life - A variety of remedies have been recommended in this disease - as bleeding, blisters the vapour bath & mercury - Dr. Dobson who wrote in 1745 is a great advocate for mercury in Hydrocephalus. Dr. Persival has given mercury to a child 4 months old for a ^{dro} Hydrocephalus, his patients as we might suppose died.

Since the publication of Dr. Dobson & Persival; mercury has been very generally employed. The latter Gentleman supposed that mercury done good independent of its salivating effects. That mercury has been of considerable service in Hydrocephalus I cannot doubt, but that it more generally fails is a fact, that I believe few will deny - The greatest objection to mercury is that it is next to impossible to salivate children; 2nd When a salivation has been excited, the discharge does not appear to give more relief than that induced by blisters. I have given mercury in a great many instances, yet I have never made a single cure by it alone - According to Dr. Keen who is an advocate for the exhibition of mercury, says that not more than two out of 20 is saved by it. Dr. Monro mentions twenty two cases of Hydrocephalus, every one of which died under the use of mercury; probably say the Dr. my failure may be attributed to not giving the medicine early enough. I think it was rather favourable, for mercury being a stimulus would assuredly increase the inflammatory

State of the brain, upon the whole I think the reputation of mercury in Hydrocephalus is very much declining. There are few Physicians but what will acknowledge the uncertainty of mercury in many instances. A German Physician is said to be very successful in treating this disease - his chief remedies were an Emetic Sal. ammoniac & mercury. Has Hydrocephalus ever been cured by mercury. I can believe the testimony of several respectable Physicians, it has cured many. There is a greater span for error in the history that have been drawn up of this disease than any with which I am acquainted. A Gutta Serena not unfrequently has a Venereal origin these cases are very well adapted to a salivation, tho in some instances it has failed. The oxymercurate of Mercury has been very commonly prescribed for this complaint. In Hufeland's journal several cases are related of cures being performed by it; a respectable Physician of this City told me, that he gave Calomel to a Patient for Gutta Serena, the disease was removed from one eye, but it soon attacked the other. Deafness depends on some causes, that no one medicine will ever be able to cure it. Deafness from Epilepsy is sometimes cured by a salivation Mr R Gordon relates the case of a young & healthy Sailor, who suddenly became deaf, after plunging into the sea, he was very speedily cured when a salivation was brought on

Sept. 21th ---

I think we have sufficient proofs of the good effects of mercury in Tetanus. I know ~~not~~ it is said by many persons that a salivation cannot be excited in time to prevent Tetanus from wounds; there are many facts which ~~contradict~~ contradict the above opinion - Tetanus often does not come on for a considerable length of time after a wound is inflicted. A lady wounded her finger so badly that amputation was performed by Dr. Winter, Mercury was previously given with a view to bring on a salivation; at the very time the glands began to be affected, the Symptoms of Tetanus first made their appearance, but as soon as the ptyalism became copious, the Tetanus went off & returned no more. I have not the least doubt, that in this case mercury saved the life of my Patient. In the Medical & Physical Journal Dr. Young relates some cases which prove incontrovertibly the great powers of Mercury in subduing Tetanus. The Dr. was so convinced of the powers of mercury in Tetanus from wounds; he says the Symptoms of the disease always increased with the diminution of the ptyalism & vice versa. I have no doubt but that Mercury has been useful in certain cases of Epilepsy, but in general I have found less advantage from a salivation than other remedies -

In cases of Epilepsy attended with Plethora, it does no good & very often it increases the effusion which is often the cause of the disease. Syphilis was the only disease for which mercury was formerly employed & I believe it is now the only medicine upon which any dependence is placed for the cure of that disease. Dr. Parsons says that no other medicine was found successful out of 30,000 which occurred at different times in the London Hospital. we seldom give Calomel in simple gonorrheal mercurial purges will often be attended with the best effects in recent cases. Mr. Hunter has known several complete cures only mercurial purges alone. a very good injection for Gonorrhoea is made by rubbing down 10 or 15 grs. of Calomel, from 1 to two grs of opium & 2 drachms of Gum Arabic, & gradually pouring on two ounces of water. Opium is added only when ardour urinae is troublesome, injection of corrosive Sublimate are very well adapted to some cases of long standing but not all to recent cases, or where much inflammation present; I could never use injections of this active preparation of half the strength recommended by Mr. Hunter, when ulcers exists in the urethra weak injections of corrosive Sublimate answers much better than any astringent: that ulcers do sometimes exist in the urethra is proved by dissection. I think the matter of Syphilis & Gonorrhoea specifically different. I must acknowledge that the following case is not in favour of my opinion—

I attended a gentleman some years ago for a simple Gonorrhoea, without shaver or any other symptoms of Syphilis, I gave him an astringent injection which he used for several days, on a sudden the discharge from the urethra ceased, & he complained to me of a sore throat; the ulcer appeared to be to be distinctly Venereal, I ordered a mercurial purge or two, & that the astringent injection should be laid aside in a very little time, the sore throat went off & the Gonorrhoea was renewed. I attended a gentleman for a pain in his Stomach, which I took to be an arthritic affection. he took some of the oil of sweet almond, which relieved his pain, but immediately on the subsidence of the pain, ⁱⁿ his stomach, ardour of urine came on, & a discharge which could not be distinguished from genuine Gonorrhoea. I connect these two cases together in order that you may see the liability of diseases to be translated to different parts & exhibiting new characters. probably the first case was not a fair one: it is seldom that Syphilis attacks the throat so suddenly - on the whole I think that those who mention the unity of these two diseases, should prescribe mercury equally in both. Sibbens appears to be a modification of Syphilis. It is a frequent disease in Scotland, but seldom occurs in this country. It is said that this disease attacks the horses much sooner than Syphilis. Sibbens is said to have prevailed as an Epidemic

Several years ago (in 1779) in Canada. It affected old people & children, whom none could accuse of immodesty.

In Frambesia or Yaws mercury is supposed by many to be a specific, while others deny it has any efficacy whatever. Dr. Hillary says that in this disease Calomel is to be preferred to mercurial ointment; he gives a curious reason for it, the acrid matter of the skin he thinks would be absorbed with the ointment & do injury to the patient. Dr. Bancroft has cured this disease by Calomel & Camphor. By this combination this medicine has a greater determination to the skin, he used with it the sudorific regimen. Perhaps there is no good effect from a salivation which cannot be obtained by this depletion of the skin. I have used this medicine myself in the case of a black fellow belonging to Mr. James Ettrick. & before the ointment of red precipitate was applied externally & my patient soon recovered. In South Carolina mercury is thought to be a specific for the yaws, but the London practitioners entertained a different opinion. They assert that mercury heals the ulcers in a very little time it attacks the bones. I don't pretend to decide this point, having seen so little of this disease however I am inclined to think that mercury often translates diseases from one part of the body to another as it did once to my knowledge translate the disease of Hepatitis to the spine producing a curved spine.

Lepra I can learn little from my own experience I have given mercury with a view to salivate, but seldom with advantage. Dr. Hillary is not an advocate for mercury in this disease, he says that altho the affection appeared to abate for a time, yet in a short time the disease almost always assumed a more violent aspect. Dr. H. supposed that much more benefit could be derived from the antimonial medicine. Dr. Moore has also been disappointed with mercury in Leprous affections - he has never seen a single cure obtained from that medicine. If any preparation of mercury are useful, I should think the red precipitate of mercury in cutaneous diseases with camphor would answer better than other.

Of the use of mercury in cutaneous diseases not affecting the general system - Psora or Itch, the Ungt. Hydragira, Nit. is very often an excellent preparation. It is much less filthy than the Ungt. Sulphuris, a solution oxy. muriate of mercury in the proportion of 1 gr. to an ounce, is often well suited to many cases of Itch. The muriate of Mercury & antimony combined will sometimes answer better than either of the above - It is opinion of many Physicians that Itch is produced by a small insect getting under the cuticle. It is the opinion of many others that no such insect are ever to be found. & it is the opinion of many others that insects are to be seen in 50 out of 100 cases -

A late writer says that he could never discover any insects at the
 he has examined many cases with the best microscopes, again
 Dr. Wilson is of the opinion that insects are always present &
 I have examined many cases, & never could perceive any thing
 like insects; I therefore am of the opinion that the disease
 can exist independent of any insect whatever - yet I
 doubt dispute the authority of those who have discovered these
 animalcula.

Lenea Capitis. The most useful preparation of
Mercury in this disease are the citron ointment &
Carrosive Sublimate dissolved in lime water, I hardly
 know which of these is the best. I have sometimes succeeded
 in curing this disease, with Laurel water when every
 thing else had failed. The vesication produced by poisonous
 oak sumach & other poisonous vegetables, are effectually
 removed by preparation of mercury. There appears to be
 a much greater disposition in some persons, than others
 to be affected with these vesications. The vesications
 are so considerable as often ^{to} confine the patient to his bed.
 They have a remarkable tendency to affect the scrotum
 & test altogether by Sympathy. I consider my self as a
 discoverer of a sovereign remedy for this complaint -
 viz a solution of Carrosive Sublimate in lime
 water. This not only cures the disease but removes
 a predisposition to it. In general it is not necessary to
 use it strong, 4 grs. to 8 ounces of water is quite sufficient.
 There is another disease resembling the above which I have

Follows the application of listers, it is attended with a violent pruritis. The solution above recommended is one of the best applications.

Tarminatio is a disease in which there is a deadly sensation of the forehead, top of the feet, or hands attended with a violent itching, persons subject to Gout are those who are mostly affected with it this disease - Light Paralytic affections often follow a paroxysm, & a prickling sensation like the bite of a pinswire. It is best not to cure this disease by any external means. I was once affected with this troublesome disease my self - I ventured to wash my forehead with a solution of corrosive Sublimate but I soon had reason to repent it; the consequence were a violent Corrosion. Mercurius Vivum or pure quicksilver has neither taste nor smell & I believe perfectly Inert, It was once fashionable in London & Edinburgh for ladies & gentlemen to take morning draughts of quicksilver, but this practice was soon laid aside in consequence of a great deal of quicksilver been observed on the floors of ball rooms. Dr Barton has exhibited quicksilver in some cases of obstinate costiveness which occurred in the P Hospital, but not with any belief of its doing any good, nearly to say he had given it. Dr Cullen says there are four ways by which

mercury is rendered active, 1. by vapour 2. by calcination or
 oxidation 3. by treating with viscid fluids 4. by combina-
 tion with acids. Water may be impregnated with quicksil-
 ver by boiling, so as to be useful in some diseases, the fumes
 of Cinnabar has been found useful in Venerial sores
 Mr. Hill mentions a patient who was salivated in three
 hours by fumigation. The grey oxide of mercury
 is preferred for fumigation in the London Hospital
 to any other preparation, it is formed by boiling
 Calamel in Lime water untill a grey precipitate
 is formed.

Febry 22th

The preparations formed by the trituration of mercury are milder than ^{these} formed by acids - But Mercurial ointment is often an uncertain preparation on account of the great variety in its strength. One of the most important preparations of mercury made by trituration is the blue mercurial pill. It is generally prepared by triturating quicksilver with a little honey & Rhubarb or Gum arabic until all the globules disappear. The more I have used these pills, the more I have become attached to them. They are the most manageable of all the preparations of mercury, & I have often succeeded with them when the more active preparations have failed. The blue pill is less disposed to pass off by the bowels, than Calomel, even when in union with opium. It is supposed by some Practitioners that the blue pills are less adapted to old Venereal sores than those more recent. I believe there is some foundation for the remark: the ~~blue~~ blue pills produce their effect so gradually as not to deter patients from their employment. The Hydragrus cum creta formely called Mercurius alibilisatus is made by rubbing together three ounces of pure -

quick silver, with fine ounces of chalk untill the globules
 disappear. This does not differ much from the blue pill; it
 is supposed by the London College to be milder, it contains
 about four per cent of oxygen. Mr. Plunk has published
 a treatise in which he recommends quick silver to
 be suspended, by triturating it for some time with Gum
 arabic, it is said to be much safer, than any of the
 preparation of mercury in not salivating (which I
 think is nothing to recommend it). The formula given
 by Mr. Plunk is to take one drachm of quick silver
 two of Gum arabic, & half a spoonful of water, to
 triturate them in a mortar for some time, & then
 add half an ounce of Syrup & Eight ounces of water
 a table spoonful is directed to be taken three times
 a day, I believe that Mr. P. gives a great deal too much
 of his gummy solution, other practitioners as well as
 my self have found nothing in it commendable except
 as a gargle in a venereal sore throat & angina maligna
 as an anthelmintic it may some times be useful
 for children. Quick silver triturated with Hog's tarc
 form the Unguentum Hydragryæ of the shops, there are
 two kinds in use, the one strong, containing nearly
 an equal part of quick silver & hog's tarc, the other
 only one part of quick silver to two or three of tarc
 formerly it was customary to add ss^{ss} of turpentine
 to kill the globules of mercury, for common purposes
 it will not answer, it is very apt to inflame
 the skin, & the same advantage may be obtained from rauced
oils

Formerly it was customary. Notwithstanding the turpentine is not admissable in common cases, yet in the Venereal & cancerous sores, it forms a very useful addition to the ointment, in summer it is very convenient to add a little sweet oil to our ointment to make it of a firm consistence. In making mercurial ointment Dr. Delone has discovered a very easy way of killing the mercury in a short time, which is to agitate the quicksilver in a vessel containing a little sweet oil & then triturating it in the usual manner with hog's lard. By this process the ointment may be well prepared in the one fifth of the time that is usually spent in this tedious operation. In using the mercurial ointment it is asserted by some that friction is unnecessary, but to be certain of its operation, I think it is a matter of great importance to rub it on for a considerable length of time. The ointment rubbed in the hands & between the fingers will be absorbed equally as soon as on any other parts of the body. The anterior part of the fore arm is also a very good place for rubbing it on. It was formerly supposed that the preparation of mercury made by calcination were better than those prepared by trituration, but I believe that this opinion is rejected. The red oxide of mercury commonly called precipitate per se is made by expressing

any quantity of mercury to a heat from 4 to 500 degrees, for some length of time, the mercury becomes oxidated & converted into a red matter; this red oxide in union with opium & some aromatic powder forms a very celebrated antimercurial remedy.

The Sulphate of Mercury, I have before spoken of it as a very active preparation & produces the general effects of mercurial medicines; the dose internally is from ʒss to ʒj in the dose of ʒjss it very generally proves emetic. This medicine rubbed down with halsam Capivi & a little Opium, was once celebrated for curing Gonorrhoea. I have never employed it. Dr. Barry affirms, that if a small portion of turpeth Mineral be taken along with the Lisbon diet drink, the medicine has a much greater determination to the skin. I think you ought to take advantage of the fact formerly mentioned of the accidental salivation, by this article when used as an Eurhine. It will probably be a very valuable remedy in those cases where a salivation is difficult to induce. The Sulphate of Mercury is not a favourite of Dr. Cullen, he seems to think it a very acid preparation & injurious to many constitutions; Mr. Brambilla mentions that the bad effects of Corrasive Sublimata was so well known to the imperial army, that the young Surgeons scarcely gave Calomel when the other was prescribed. It is one of the most active of all the preparations of mercury & considerable caution is necessary in its use.

I have had a great deal of experience with the common Carrosine Sublimate & am inclined to believe that it is much more manageable than is commonly supposed. In combination with opium its acrimony is blended I have found it to be one of the best remedies in the Venereal disease of young Children, when the skin is mostly affected. Deafness & loss of Vision not unfrequently the consequence of the Lues Venerea in Children. I have not failed in a single instance to cure this disease, & prevent its unpleasant consequences, when the oxy muriate of mercury was given in time. The formula which I have commonly employed is to rub down a small portion of this medicine, with Gum Arabic or sugar to which a little Laud. & water is added. This is to be given by drops with a little milk in this way the dose may be readily ascertained by the effects produced. It is necessary to persist in the use of this medicine, for a considerable length of time, otherwise the disease will return in a more formidable manner. The Sub muriate of Mercury is not so manageable as the more active preparations, in some cases when we wish to salivate, it is almost impossible to prevent it from purging, yet I must acknowledge that Calomel not unfrequently salivates, when it purges considerably, so that this effect is not so great an objection as might be supposed, when I wish to excite a salivation speedily I very often give a large dose of Calomel to purge smartly & very generally I find that when this is done Calomel is necessary to excite a salivation.

The Hydragyrum Nitratum ruber is made by exposing the nitrate of mercury to heat in a crucible, the Nitric acid is decomposed its oxygen unites with the mercury, while the Nitrogen escapes the mercury is left in a state highly oxidated, this preparation does not differ materially from the precipitate per se. I think this the most important of all the preparations of mercury. It may be given with opium in doses of $\frac{1}{4}$ or $\frac{1}{6}$ of a gr. but in a short time it may be taken to the extent of 1 gr. It affects the gums very soon & is a valuable medicine in all Venereal & Scrophulous sores. Another preparation of Mercury which I deem a very important one, yet remains to be mentioned.

The Unguentum Hydragyri Nitratum is made by dissolving an ounce of quick silver previously melted in an equal quantity of Nitric acid & pouring it into a pound of hog's lard previously melted & beginning to grow cold; it is apt to spoil by keeping. Therefore but a small quantity should be made at a time. In Linea Capitis, & other cutaneous diseases it is a valuable medicine.

Marks White Drops is made by four ounces of the solution of mercury in aqra Fontis & four ounces of ammonia & quick silver each. The ingredients to be heated in a quantity of water for some time; filter the liquor thro paper & evaporate it untill crystals are obtained, lastly dissolve the crystals in warm water. The French Physicians are very much opposed to all the preparations of Mercury with Nitric acid; they affirm that the constitution, suffers great

Injury their use, other practitioners have not formed the above opinion of any importance. The Phosphate of Mercury has of late been much recommended in Syphilis, particularly in ulcers of the prepuce inflamed eyes from Leues & Chancres of the Penis Eosetosis & in Chronic affection of the skin - It is an extremely active preparation, exciting nausea & vomiting in very small doses. The best way of exhibiting it is to take 4 gr^{ss} of the Phosphate 14 of cinnamon powder 30 of loaf sugar to be divided into 8 parts, one to be taken every morning untill Salivation is excited. I have been disappointed with this medicine; I think its virtues are greatly overrated - It is not so good as the red precipitate.

The Barate of Mercury is seldom employed in the United States, it much esteemed by the French - How does mercury act in curing diseases; Five different opinions have been advanced - The 1st is that it operates by the evacuation that it produces - 2^d - that it acts mechanically by its weight - 3^d - that it is an antidote to the poison of Syphilis, that it unites with & forms a neutral - 4th - the opinion of Dr. Cullen that it evacuates the poison thro the Salivary glands & 5th the opinion of Mr. Hunter that it operates by exciting a new action -

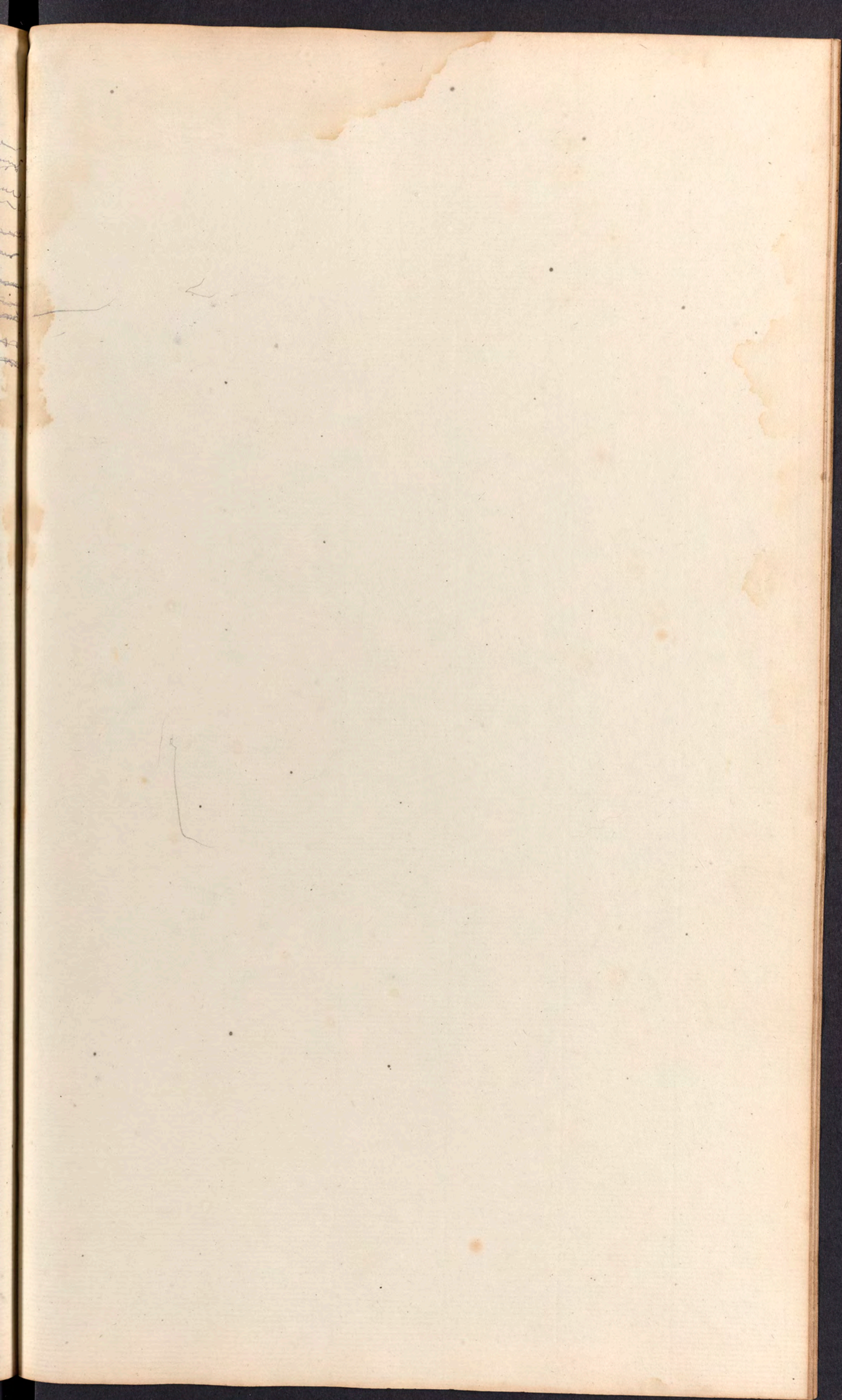
Mercurius Cinereus or Hydragyrus Nitratus Cinereus is formed by dissolving quicksilver in Nitric acid & precipitating it with muriate of ammonia. The powder to be well washed, this was first introduced

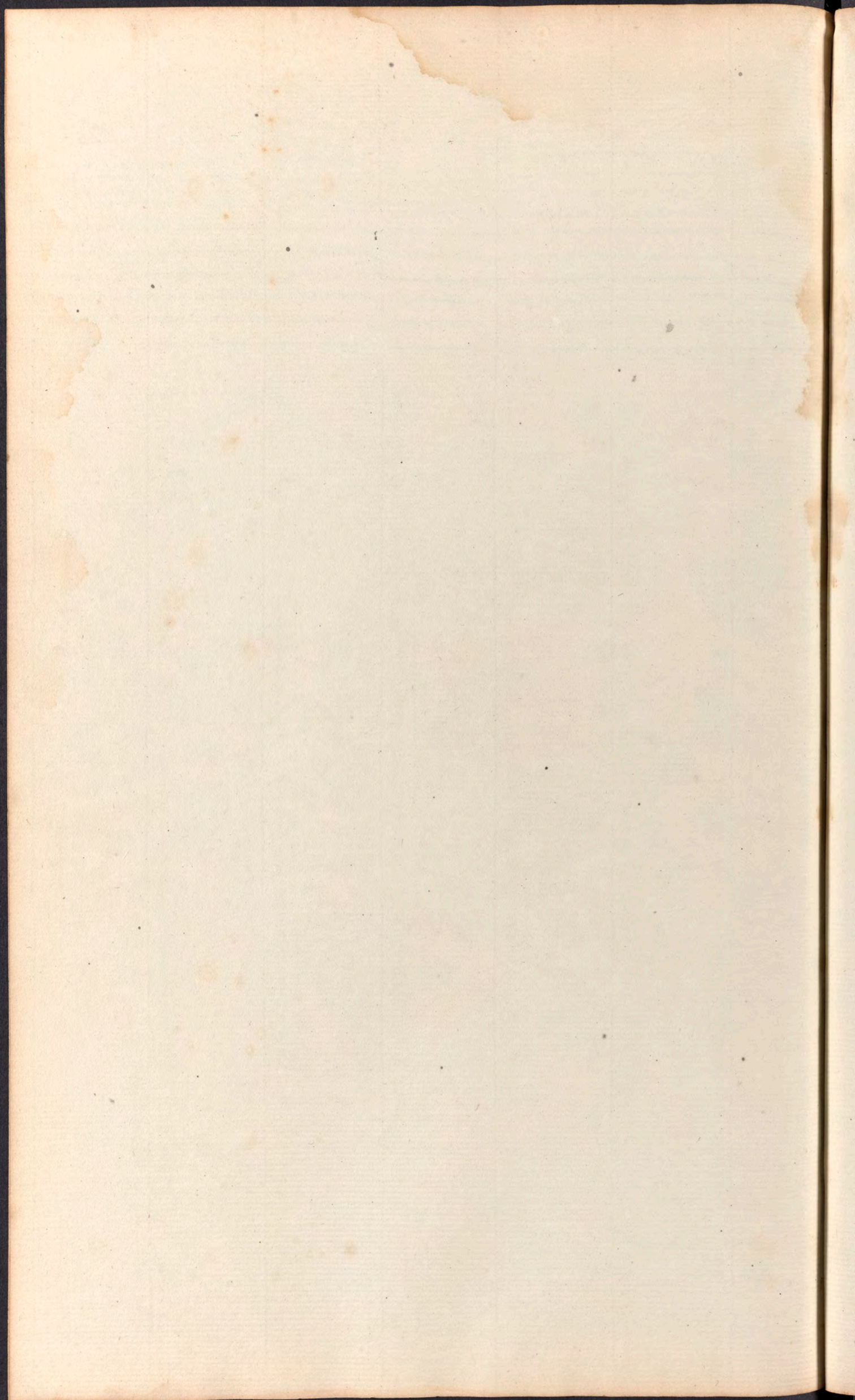
into practice by Dr. Black as a remedy for Syphilis, he directs it to be made into pills with conserve 1 grm. to be taken every night. There is also another preparation of Mercury, but of less importance than the ^{white} one. It is called mercurial soap, & is formed by adding a little ^{white} soap to a solution of quicksilver in Nitric acid, the froth which arises to the top is to be skimmed off & dissolved in distilled water 80 drops are directed to be taken twice a day. In some Venereal affections was formerly much celebrated.

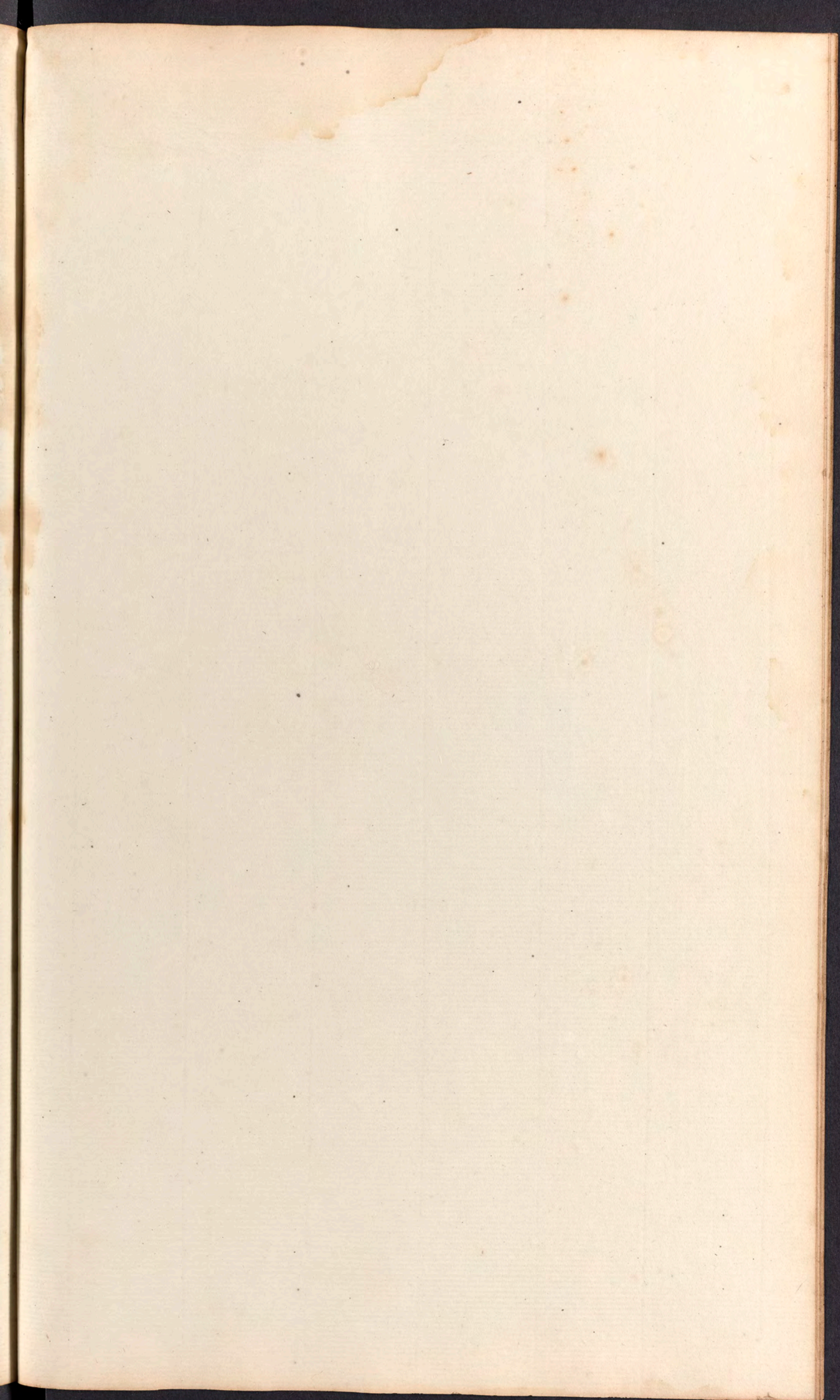
Dr. Barton proceeded to give some account of the different opinions on the operation of mercury. He appeared to favour the opinion of Mr. Hunter most, but he observed that many objections might be urged against it. Dr. Barton observed that if the Syphilitic virus ~~is~~ cured the Venereal disease by inducing a greater irritation than that of the Syphilitic virus, why will not other medicines cure the disease which also are powerful irritants. Mr. Hunter appears to have been aware of this objection, & then endeavoured to prove that Nitric acid, Sulphate of Copper &c. have destroyed the poison of Syphilis, but of this Dr. Barton very much doubted, at least he observed, that few medical Practitioners would now place much reliance on any medicine for the cure of Syphilis, but mercury. The Carbonate of Ammonia, we are told, has cured Syphilis. There are also many other medicines that occasionally salivate besides mercury, as some of the preparations of Lead Zinc Antimony Arsenic Copper & among the Vegetable kingdom there are camphor Stannum barium maculatum opium Solanum Dulcamaria a butter Sweet Gyasiamus Zanthoxylum & the horse radish, the instances are rare in which all these medicines salivate, but that they sometimes produce this effect cannot be denied.

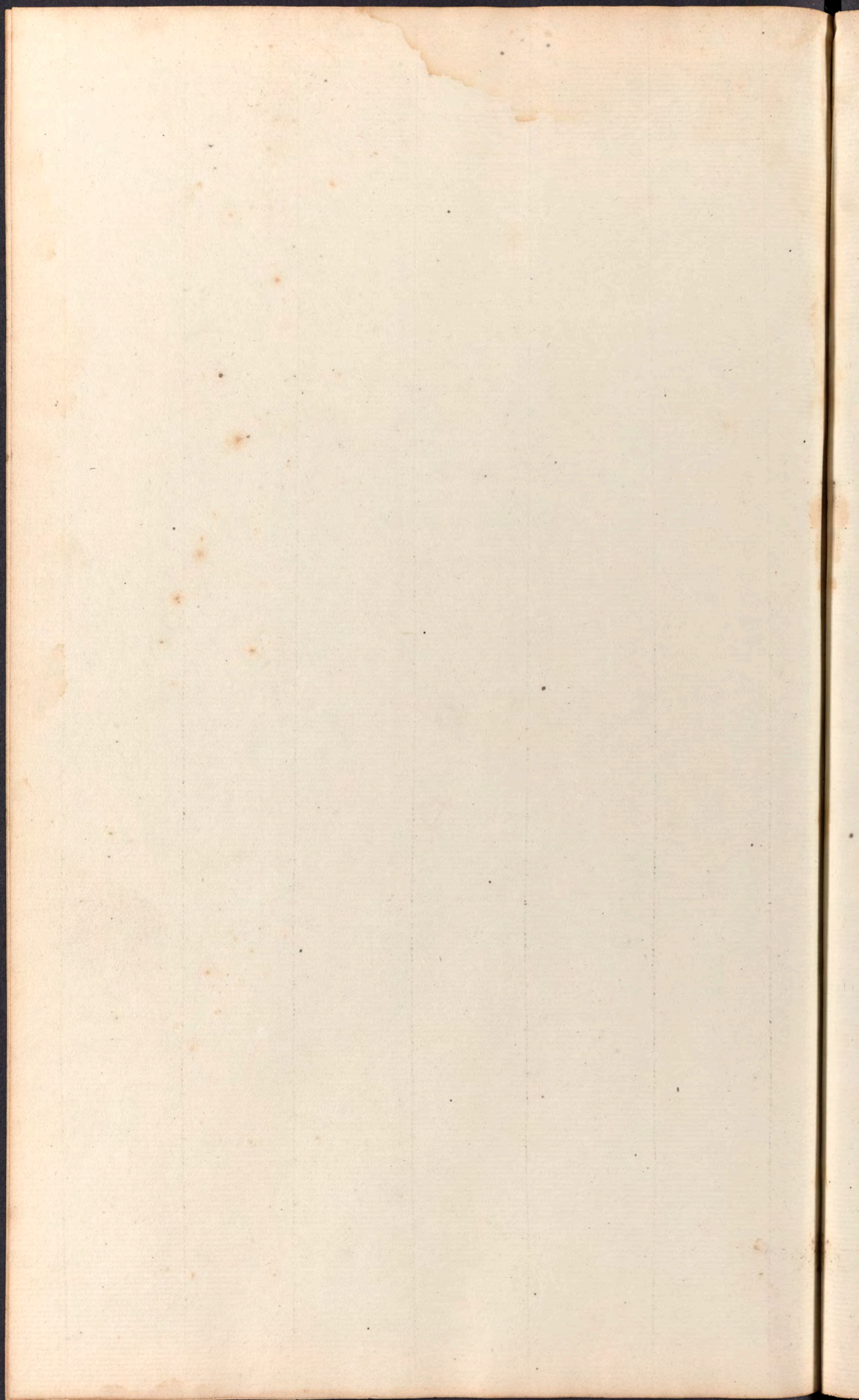
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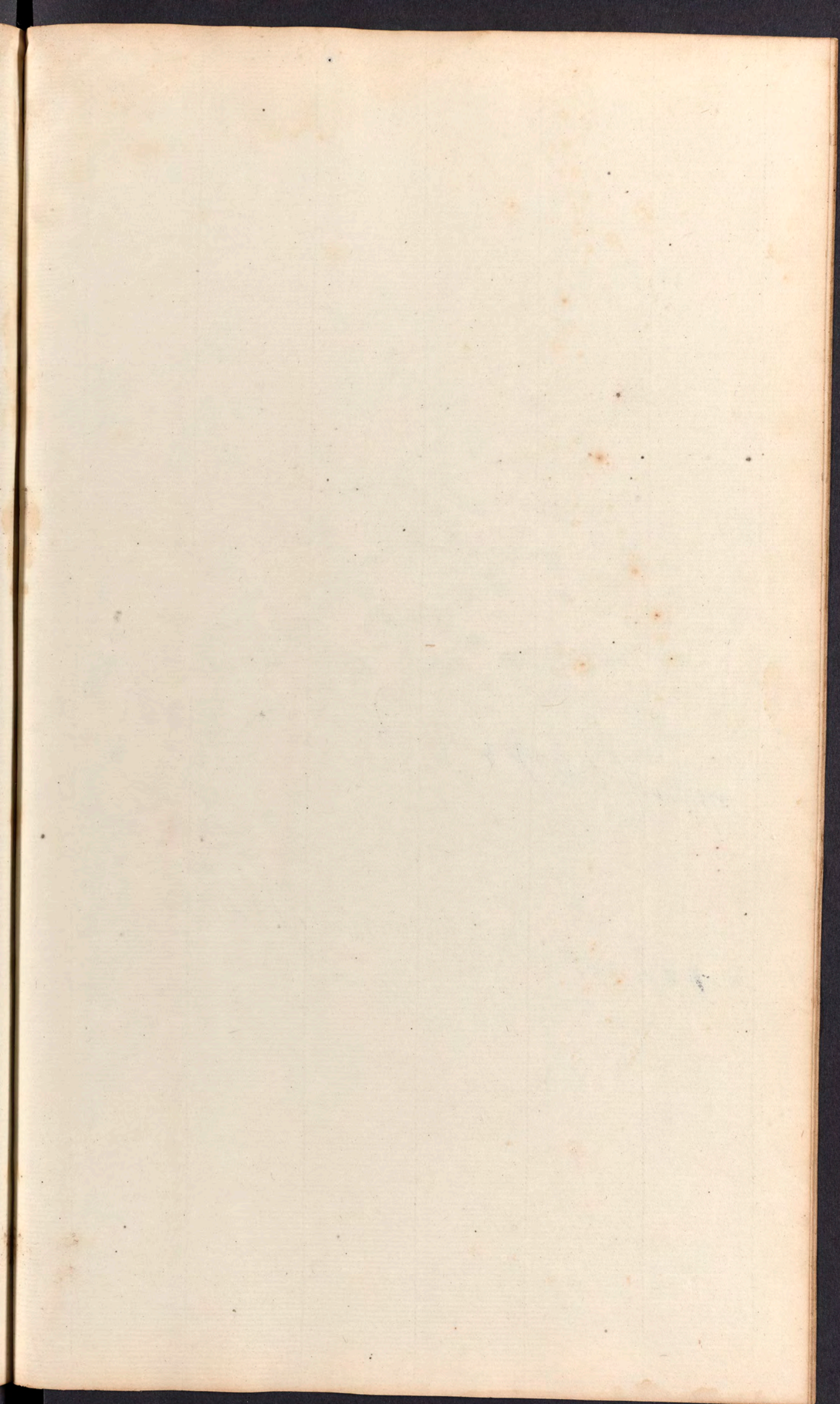
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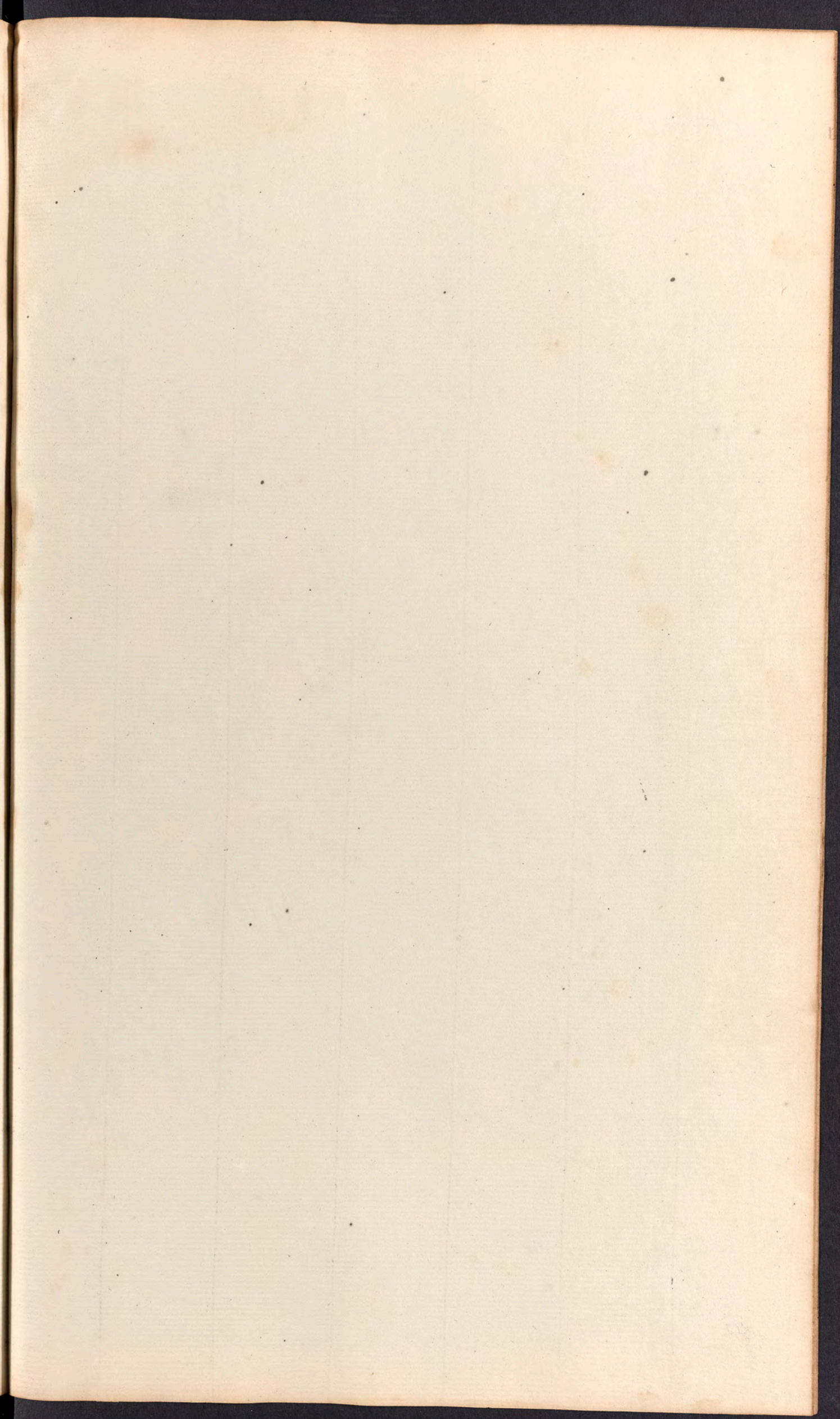


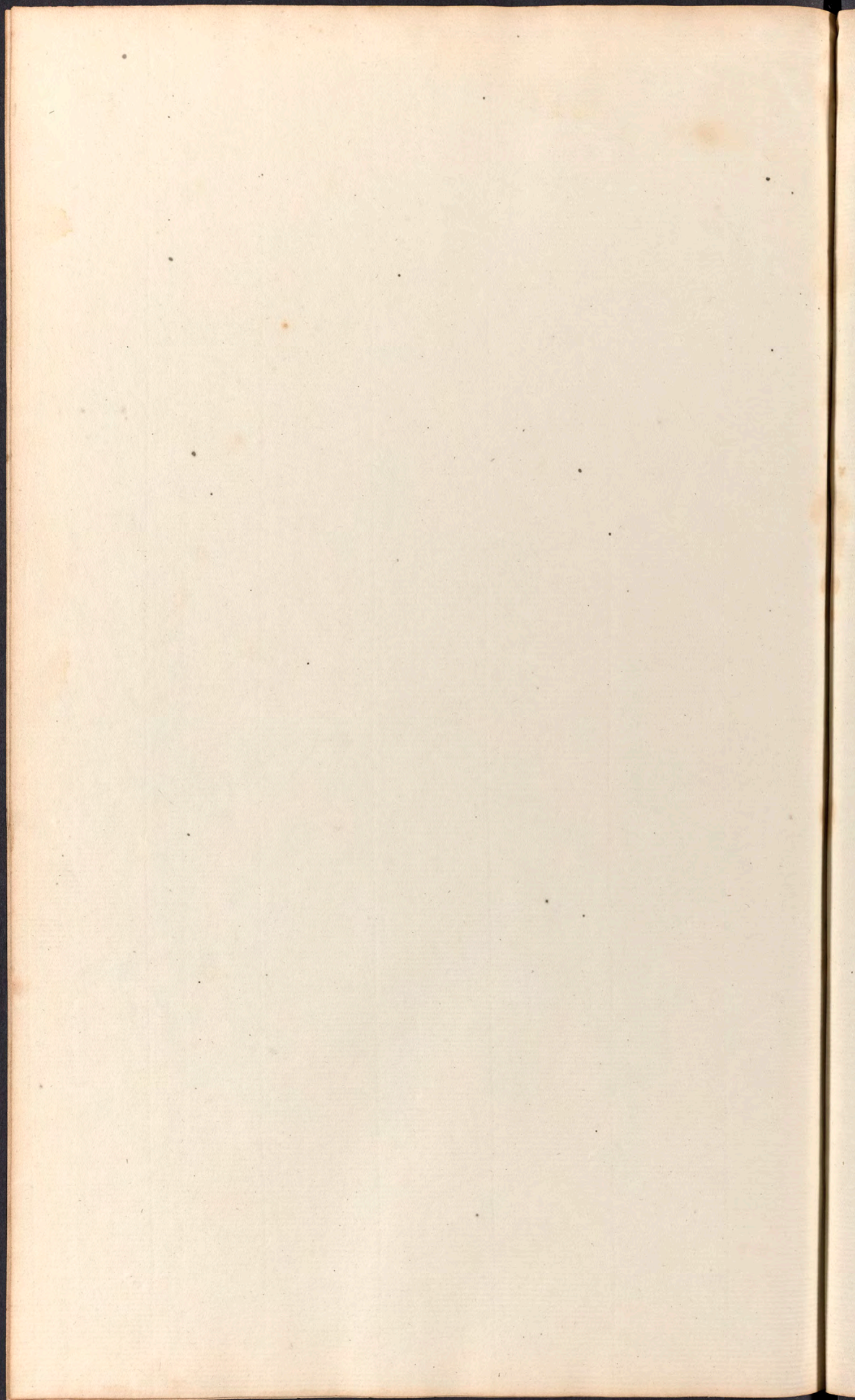


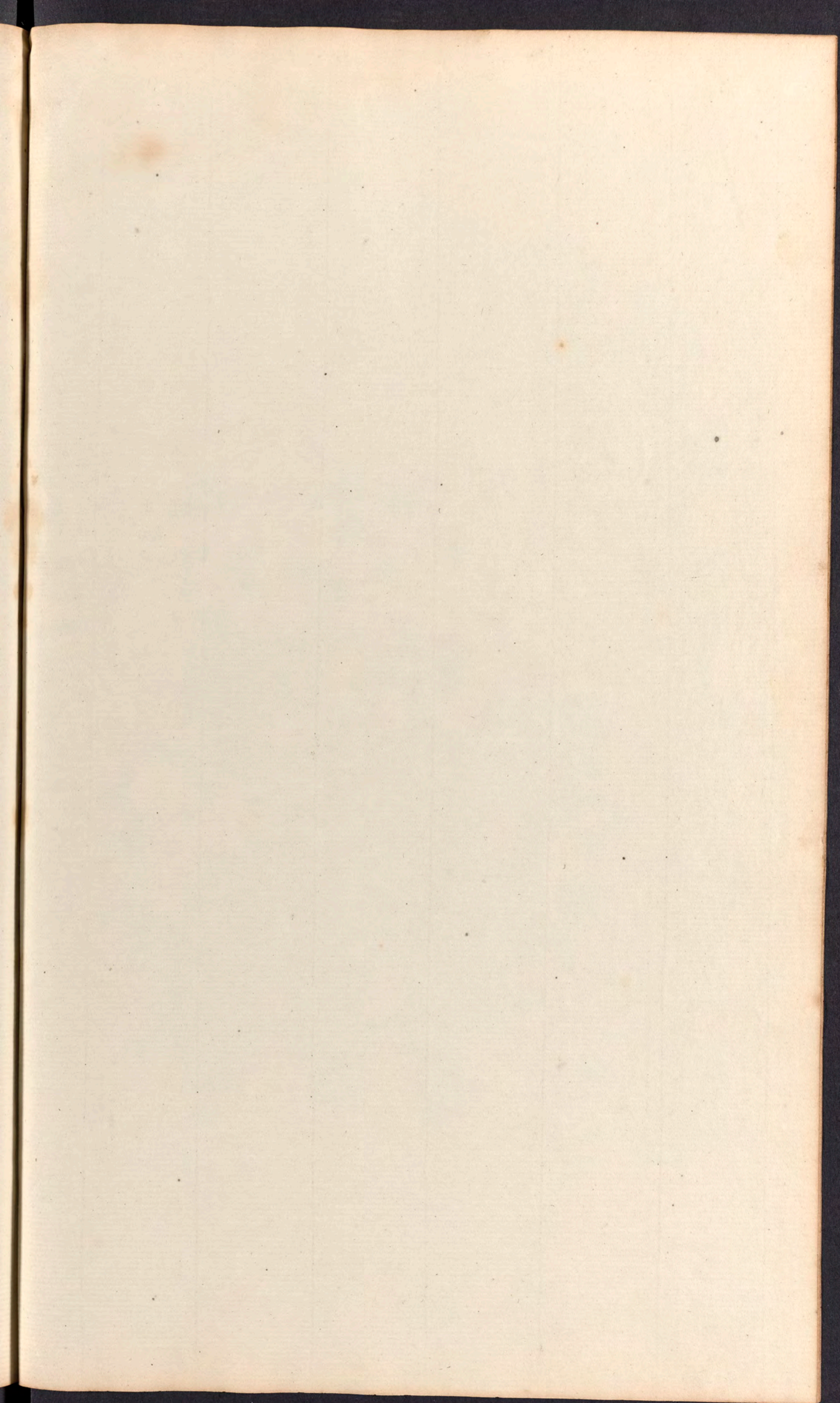


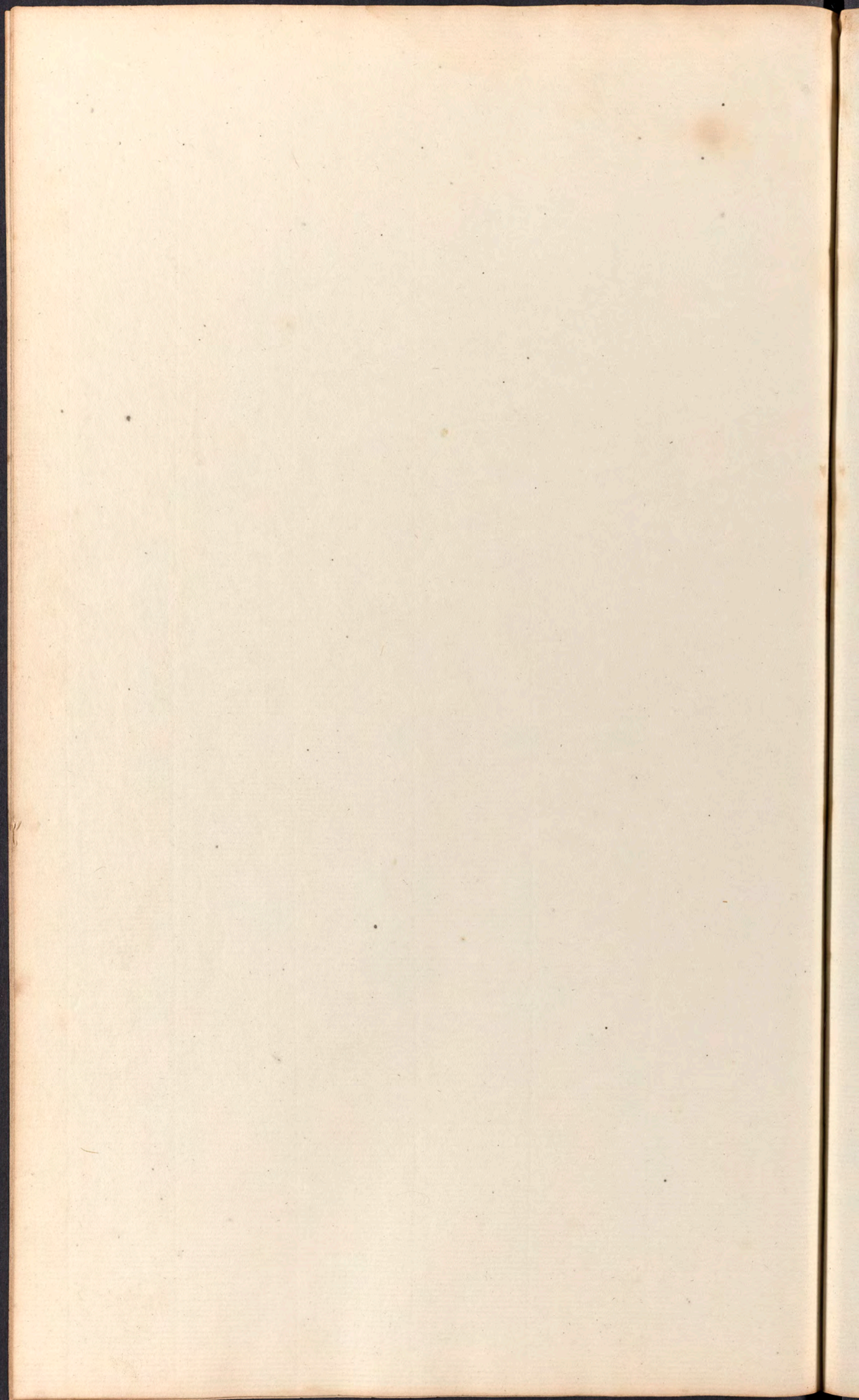
Charles C. Cooke

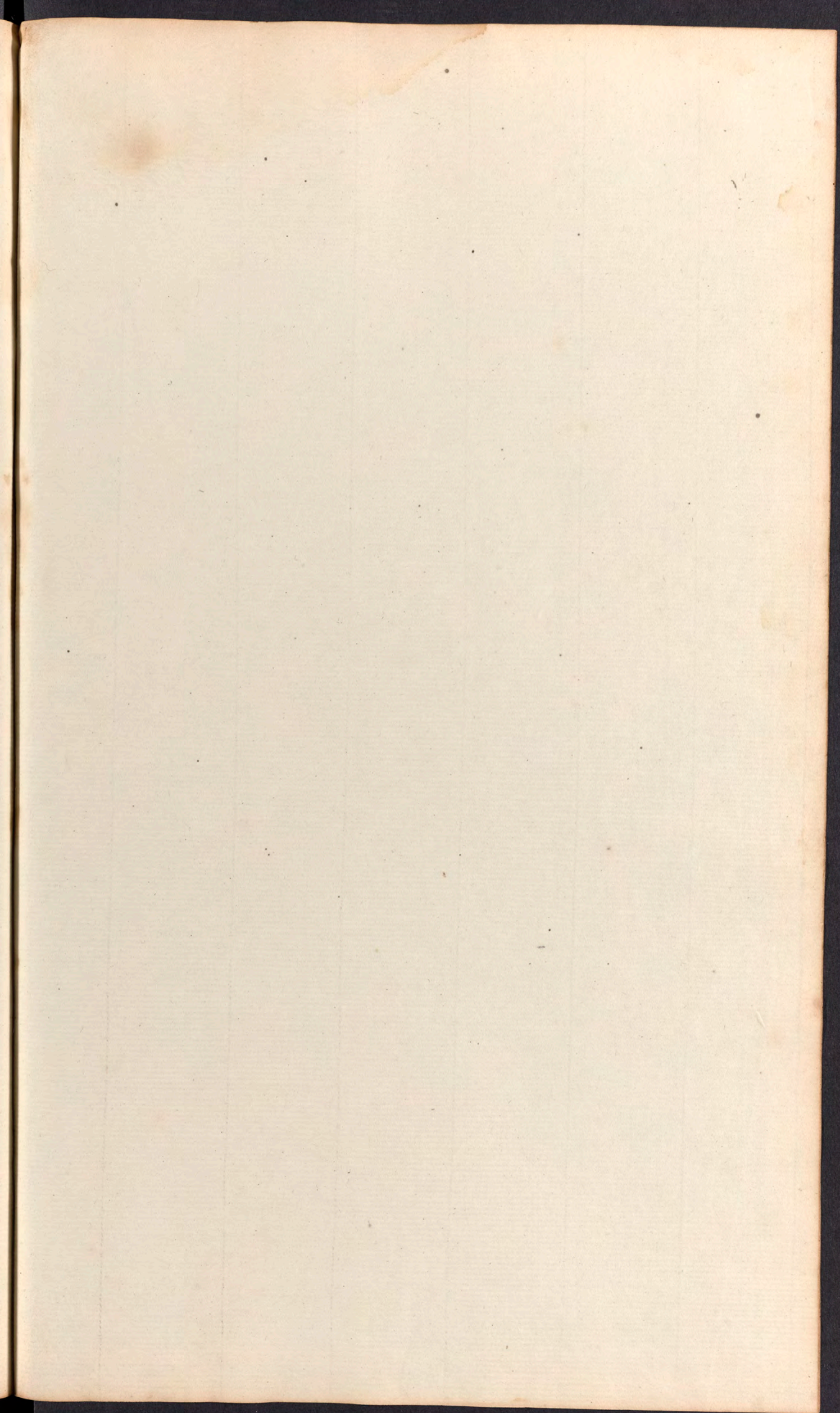
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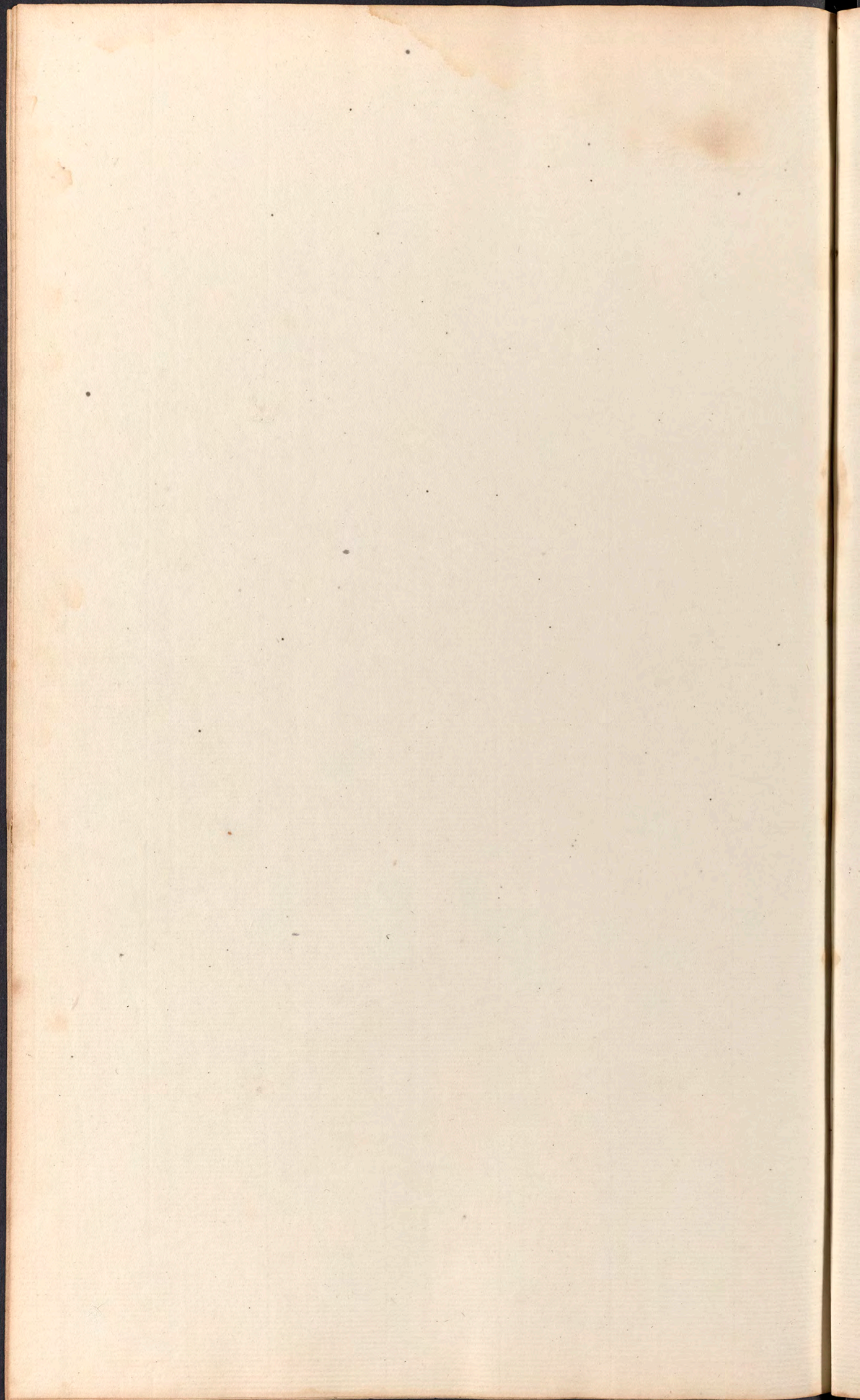


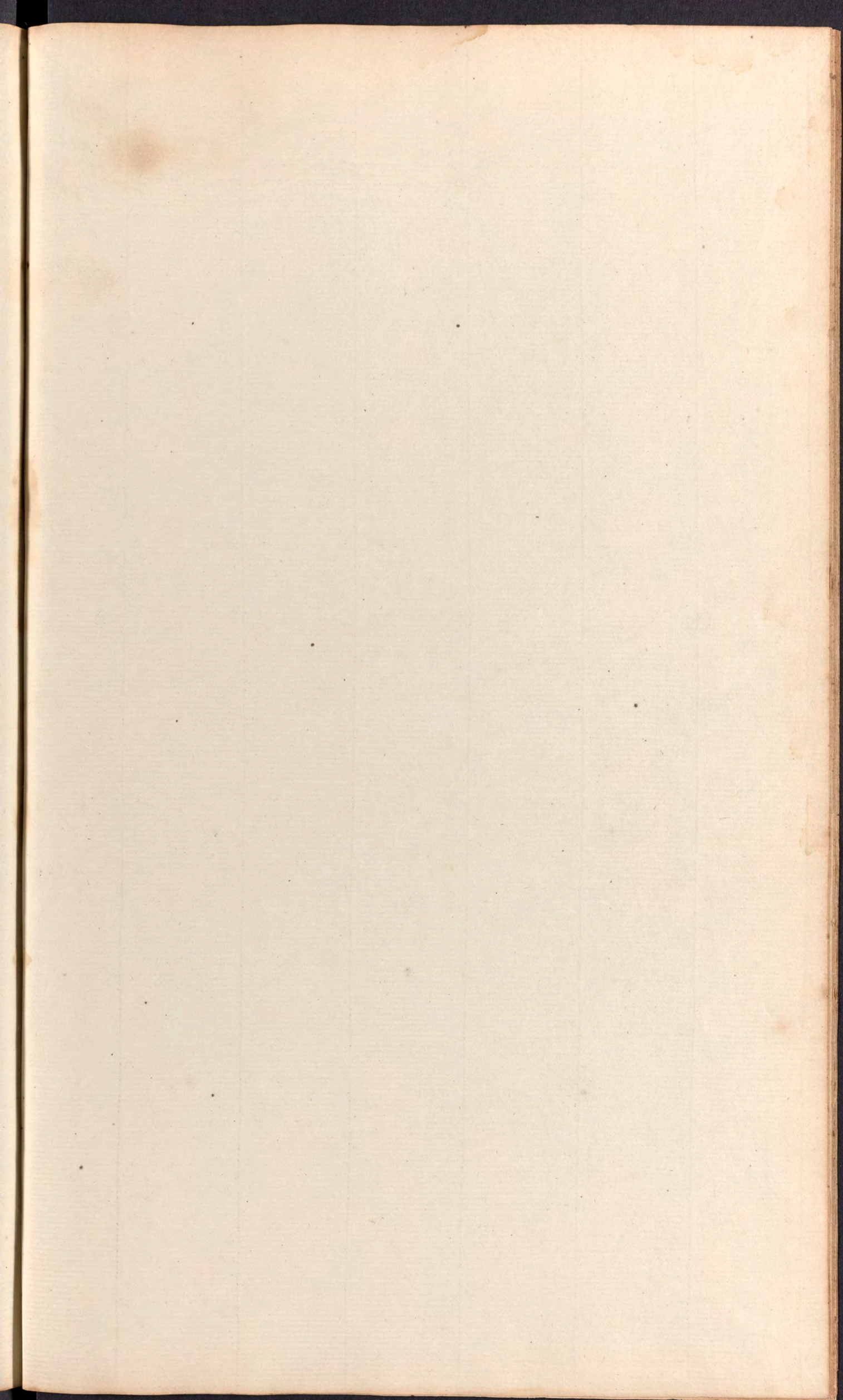


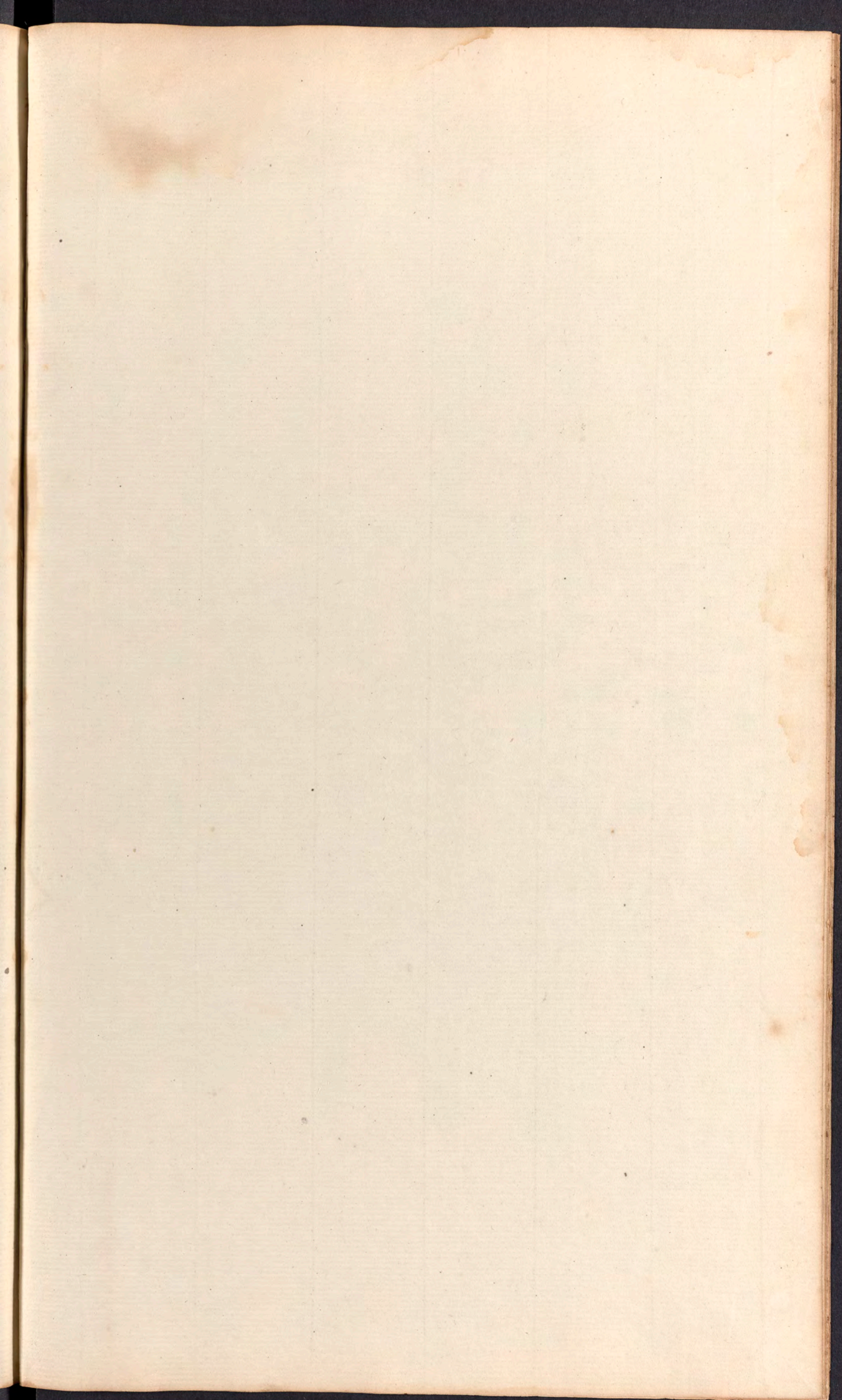


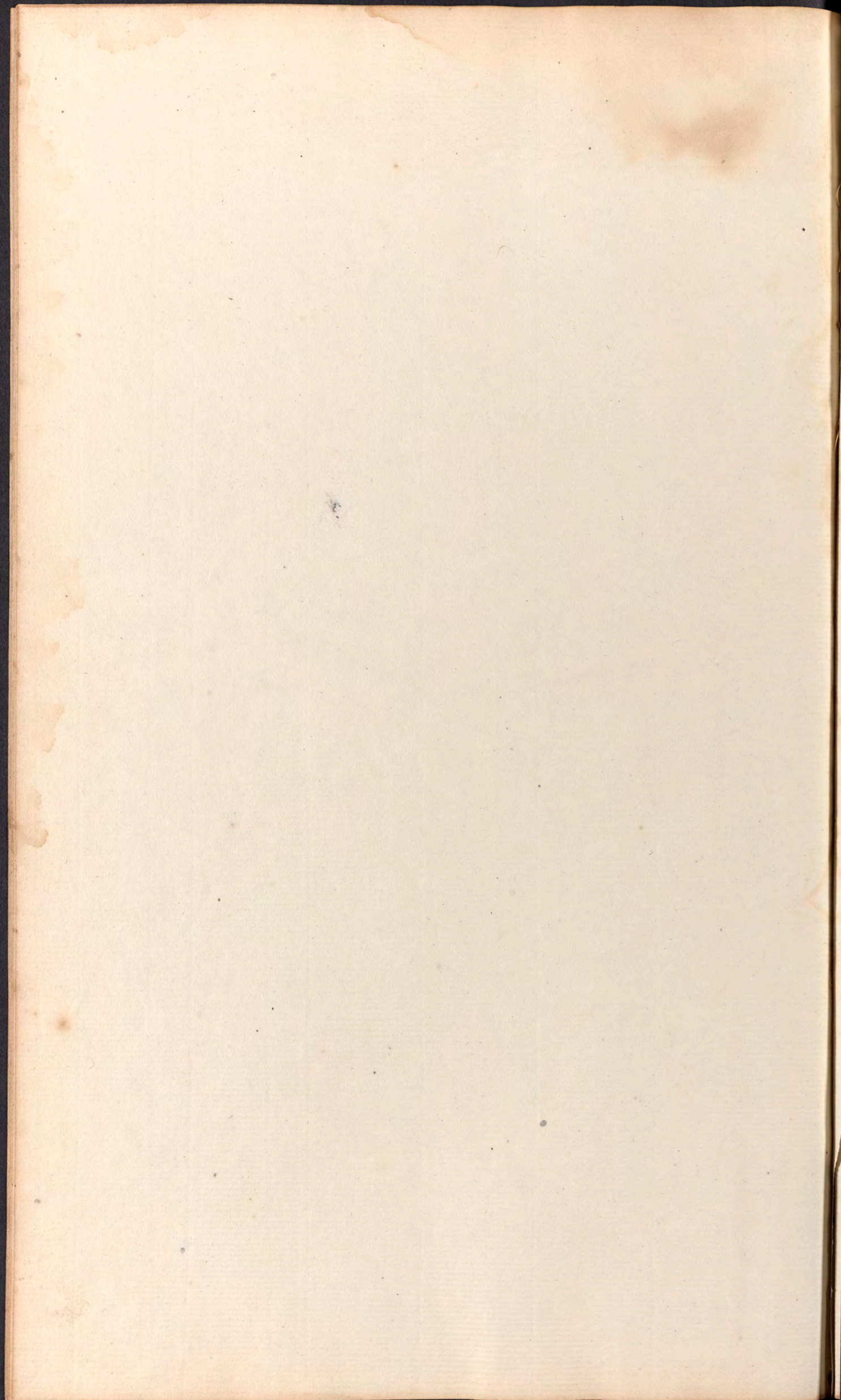


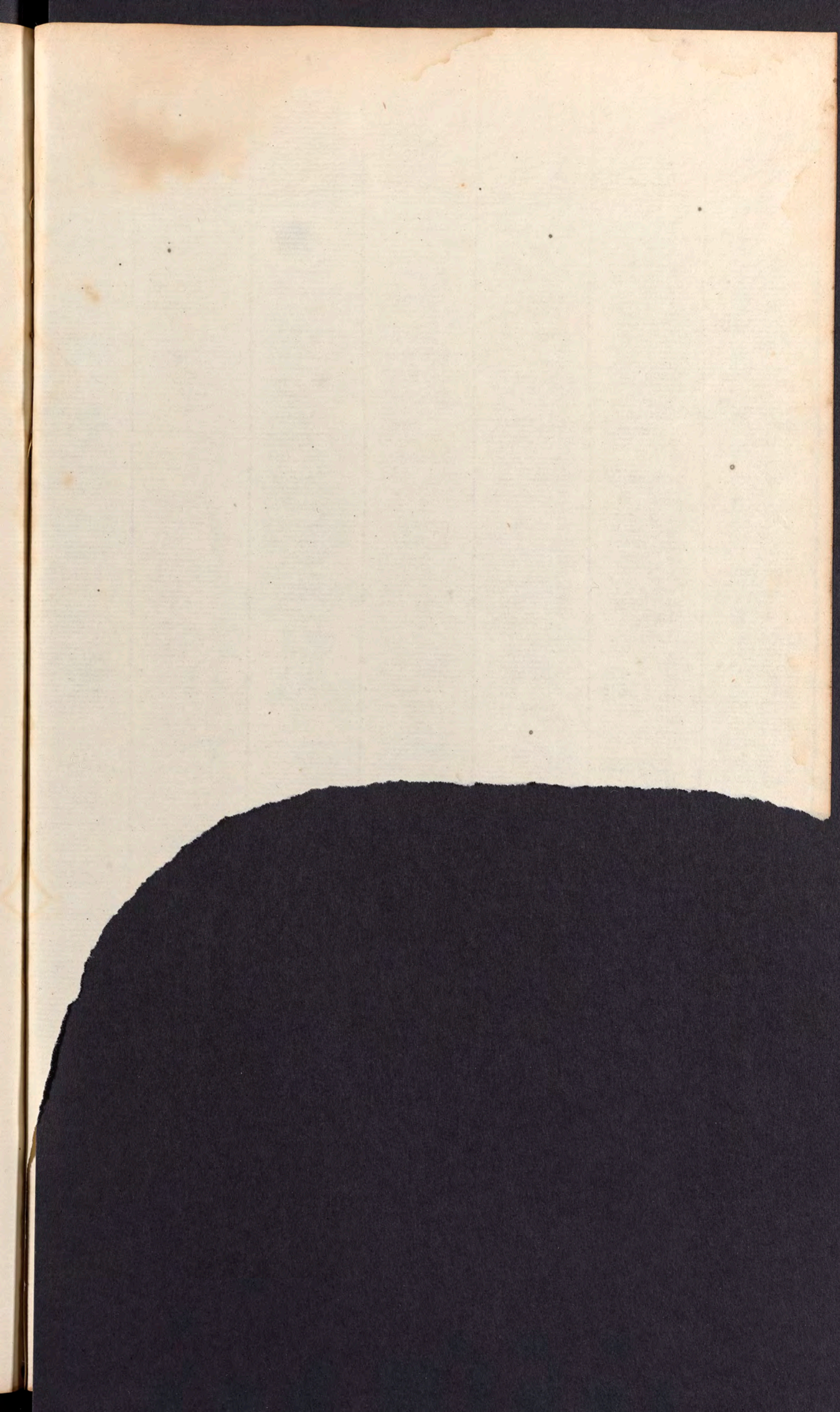


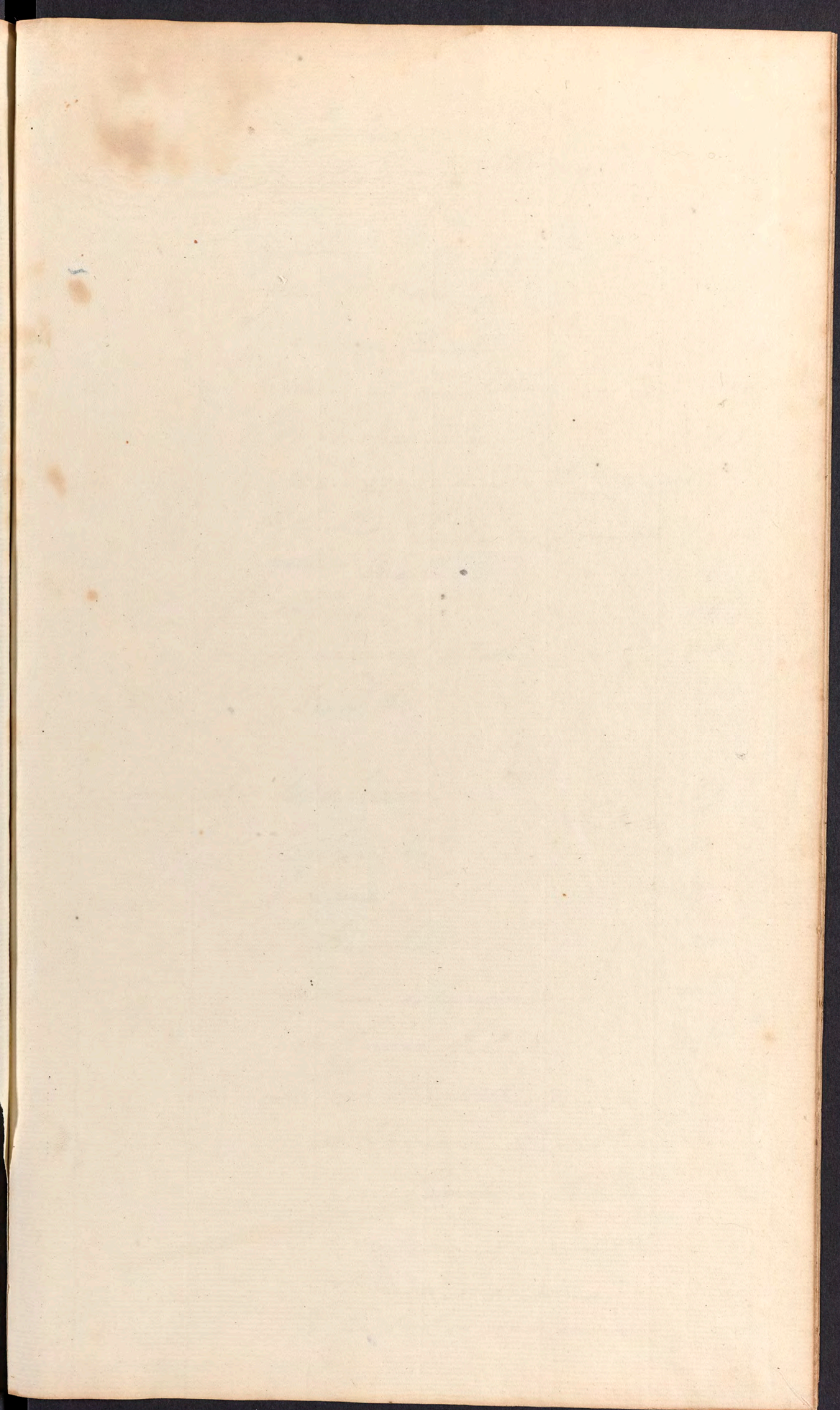


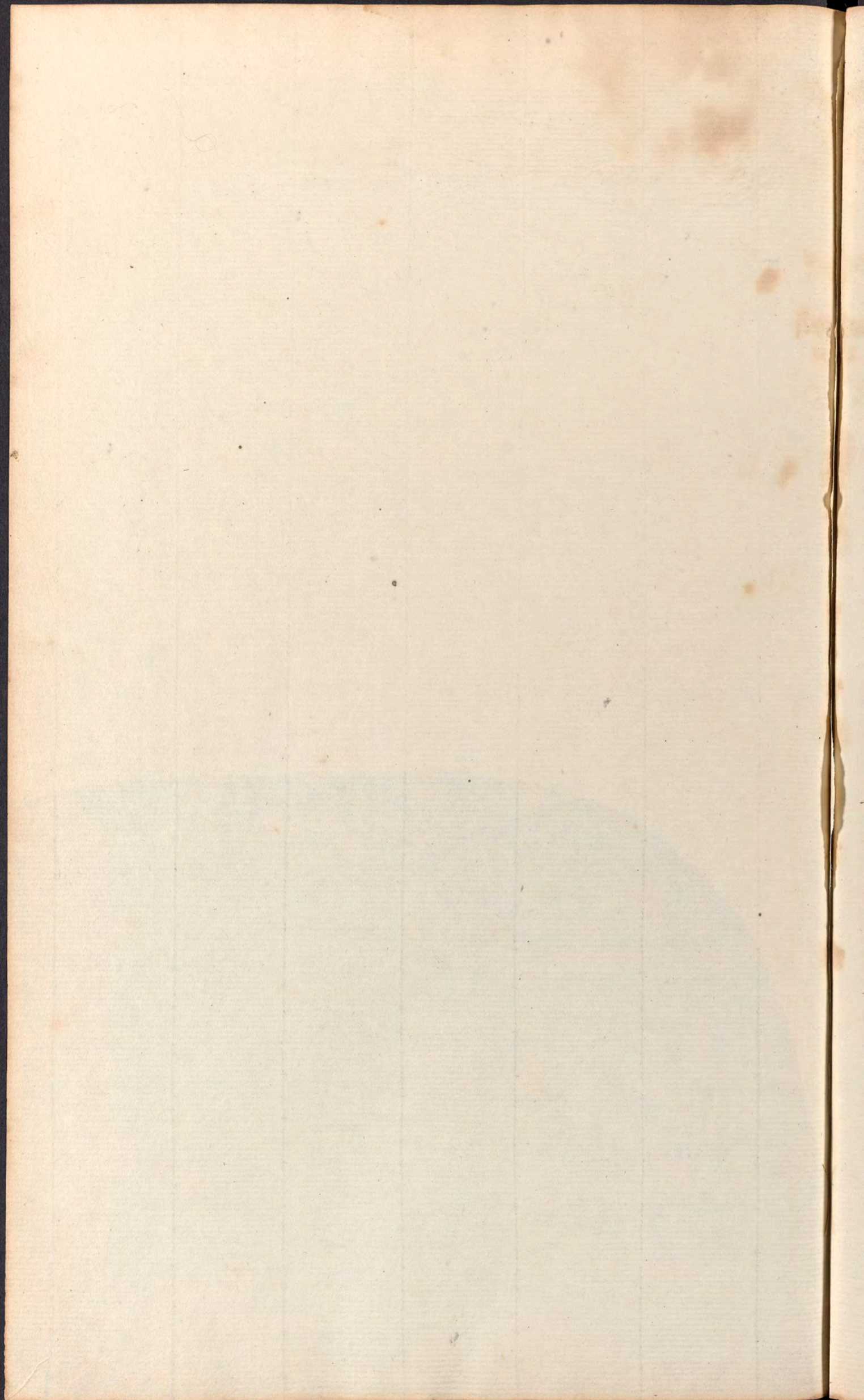












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Handwritten notes in left margin, including 'Stimulantia' and 'Evacuanta'.

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Albee Street

